

U. S. DEPARTMENT OF COMMERCE  
NATIONAL BUREAU OF STANDARDS

UNITS OF WEIGHT AND MEASURE  
(UNITED STATES CUSTOMARY AND METRIC)  
DEFINITIONS AND TABLES  
OF EQUIVALENTS

MISCELLANEOUS PUBLICATION M121  
(Superseding Circular C47)

*became SP 256*



**U. S. DEPARTMENT OF COMMERCE**

DANIEL C. ROPER, *Secretary*

**NATIONAL BUREAU OF STANDARDS**

LYMAN J. BRIGGS, *Director*

---

NATIONAL BUREAU OF STANDARDS MISCELLANEOUS PUBLICATION M121

---

**UNITS OF WEIGHT AND MEASURE  
(U. S. CUSTOMARY AND METRIC)  
DEFINITIONS AND TABLES  
OF EQUIVALENTS**

---

Issued January 1936

[Superseding Bureau of Standards Circular C47]



UNITED STATES  
GOVERNMENT PRINTING OFFICE  
WASHINGTON : 1936



## CONTENTS

	Page
I. Introduction-----	1
II. Fundamental equivalents-----	2
III. Definitions of units-----	3
1. Length-----	3
2. Area-----	3
3. Volume-----	4
4. Capacity-----	4
5. Mass-----	5
IV. Standards of measurement-----	5
V. Spelling and abbreviation of units-----	6
1. List of the most common units of weight and measure and their abbreviations-----	7
VI. Tables of interrelation of units of measurement-----	8
1. Length-----	8
2. Area-----	8
3. Volume-----	8
4. Capacity—Liquid measure-----	8
5. Capacity—Dry measure-----	10
6. Mass—Less than pounds and kilograms-----	10
7. Mass—Greater than avoirdupois ounces-----	10
VII. Comparison of metric and customary units from 1 to 9-----	12
1. Length-----	12
2. Area-----	12
3. Volume-----	12
4. Capacity—Liquid measure-----	13
5. Capacity—Dry measure-----	13
6. Mass-----	13
7. Comparison of the various tons and pounds in use in the United States (from 1 to 9 units)-----	14
VIII. Special tables-----	15
Length:	
Inches and millimeters—equivalents of decimal and binary fractions of an inch, in millimeters, from $\frac{1}{64}$ to 1 inch-----	15
Hundredths of an inch to millimeters, from 1 to 99 hundredths-----	15
Millimeters to hundredths of an inch, from 1 to 99 units-----	15
United States nautical miles, international nautical miles, and kilometers-----	16
Millimeters to inches-----	18
IX. Tables of equivalents from 1 to 999 units-----	27
Length:	
Feet to meters-----	28
Meters to feet-----	30
Miles to kilometers-----	32
Kilometers to miles-----	34
Area:	
Acres to hectares-----	36
Hectares to acres-----	38
Volume:	
Cubic yards to cubic meters-----	40
Cubic meters to cubic yards-----	42
Capacity:	
Liquid quarts to liters-----	44
Liters to liquid quarts-----	46
Gallons to liters-----	48
Liters to gallons-----	50
Bushels to hectoliters-----	52
Hectoliters to bushels-----	54
Mass:	
Avoirdupois pounds to kilograms-----	56
Kilograms to avoirdupois pounds-----	58
X. Metric and English distance equivalents for athletic events (track and field)-----	60
1. Metric units in athletics-----	60
2. Distance equivalents-----	61
XI. Graphic comparison chart of screw thread pitches-----	Facing 62

	Page
XII. Status of international metric system in the United States-----	63
1. Constitutional authority to fix standards-----	63
2. Metric system legalized-----	63
3. Metric standards adopted as fundamental-----	63
4. Metric balances furnished certain post offices-----	63
5. Metric weights used for certain coins-----	63
6. Congress provides metric standards for the States of the Union, land-grant agricultural colleges, and the Smithsonian Institution-----	63
7. United States joins in establishing International Bureau of Weights and Measures-----	63
8. Congress adopts the metric units for electrical measures-----	64
9. Metric system required in the medical work of the War and Navy Departments and U. S. Public Health Service of the Treasury Department-----	64
10. Metric carat adopted as unit of weight for diamonds and other precious stones-----	64
11. Metric system optional in Puerto Rico-----	64
12. Metric system made the legal system in the Philippine Islands-----	64
13. Relation between inches and millimeters adopted by American Standards Association-----	65
14. Distances in multiples of metric units adopted for Amateur Athletic Union track events-----	65
XIII. Index-----	66

## I. INTRODUCTION

This publication supersedes Bureau Circular C47, issued July 1, 1914. Necessary corrections have been made and the text has been revised and rearranged. The supplement to Circular C47 (Table of Equivalents—Millimeters to Inches), issued October 27, 1917; Miscellaneous Publication M49 (Graphic Comparison of Screw Thread Pitches); and Letter Circular LC376 (Metric and English Distance Equivalents for Athletic Events) are included in the body of the publication.<sup>1</sup>

In the construction of the tables in this publication, when the fundamental relation of the units furnished directly a reduction factor for use in determining the multiples of the units, this factor was used in its fundamental form, as, for example, that 1 meter=39.37 inches. Reduction factors which it was necessary to obtain, however, by multiplication, division, powers, or roots, etc., of the fundamental relations were usually carried out to a greater degree of accuracy than that to which it is usually possible to make measurements, for convenience in computing the multiples to the accuracy desired.

When the tables do not give the equivalent of any desired quantity directly and completely, the equivalent can usually be obtained, without the necessity of making a multiplication of these reduction factors, by using quantities from several tables, making a shift of decimal points, if necessary, and merely adding the results.

The supplementary metric units are formed by combining the words "meter", "gram", and "liter" with the six numerical prefixes, as in the following table:

Prefixes		Meaning	Units	
milli-	= <i>one-thousandth</i>	$\frac{1}{1000}$	.001	"meter" for length.
centi-	= <i>one-hundredth</i>	$\frac{1}{100}$	.01	
deci-	= <i>one-tenth</i>	$\frac{1}{10}$	.1	"gram" for weight or mass.
<i>Unit</i>	= <i>one</i>		1	
deka-	= <i>ten</i>	$\frac{10}{1}$	10	
hecto-	= <i>one hundred</i>	$\frac{100}{1}$	100	"liter" for capacity.
kilo-	= <i>one thousand</i>	$\frac{1000}{1}$	1000	

All lengths, areas, and cubic measures in the following tables are derived from the international meter, the basic relation between units of the customary and the metric systems being:

$$1 \text{ meter} = 39.37 \text{ inches},$$

contained in the law of July 28, 1866,<sup>2</sup> and set forth in the Mendenhall Order<sup>3</sup> of April 5, 1893, namely:

$$\frac{1 \text{ yard}}{1 \text{ meter}} = \frac{3600}{3937}.$$

<sup>1</sup> Weights and measures publications of the National Bureau of Standards are listed in Miscellaneous Publication M103, Weights and Measures References, which may be obtained by purchase (price 10 cents) from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C.

<sup>2</sup> United States Code, title 15, ch. 6, sec. 205 (Revised Statutes, sec. 3570).

<sup>3</sup> U. S. Coast and Geodetic Survey Bulletin 26, Apr. 5, 1893.

All capacities are based on the equivalent 1 liter equals 1.000 027 cubic decimeters. The decimeter is equal to 3.937 inches in accordance with the legal equivalent of the meter given above. The gallon referred to in the tables is the United States gallon of 231 cubic inches. The bushel is the United States bushel of 2 150.42 cubic inches. These units must not be confused with the British units of the same name which differ from those used in the United States. The British gallon (277.420 cubic inches) is approximately 20 percent larger, and the British bushel (2 219.36 cubic inches) is 3 percent larger than the corresponding units used in this country.

All weights are derived from the International Kilogram, as authorized in the Mendenhall Order of April 5, 1893. The relation used is 1 avoirdupois pound = 453.592 427 7 grams.

## II. FUNDAMENTAL EQUIVALENTS

In its original conception the meter was the fundamental unit of the metric system, and all units of length and capacity were to be derived directly from the meter which was intended to be equal to one ten-millionth of the earth's quadrant. Furthermore, it was originally planned that the unit of mass, the kilogram, should be identical with the mass of a cubic decimeter of water at its maximum density. At present, however, the units of length and mass are defined independently of these conceptions.

The International Prototype Meter is kept at the International Bureau of Weights and Measures. By definition the meter now bears no definite relation to the earth's quadrant, but is the length of a certain platinum-iridium bar when supported in a definitely specified manner, at the temperature of melting ice, and at standard atmospheric pressure (760 millimeters of mercury). The kilogram is independently defined as the mass of a definite platinum-iridium standard, the International Prototype Kilogram, which is also kept at the International Bureau of Weights and Measures. The liter is defined as the volume of a kilogram of water, at standard atmospheric pressure, and at the temperature of its maximum density, approximately 4° C. The meter is thus the fundamental unit on which are based all metric standards and measurements of length and area, and of volumes derived from linear measurements.

A supplementary definition of the meter in terms of the wave length of light was adopted provisionally by the Seventh General (International) Conference on Weights and Measures, in 1927. According to this definition, the relation<sup>4</sup> for red cadmium light waves under specified conditions of temperature, pressure, and humidity is

$$1 \text{ meter} = 1\ 553\ 164.13 \text{ wave lengths.}$$

This corresponds to a wave length (cadmium red) of

$$6\ 438.469\ 6 \times 10^{-7} \text{ millimeters.}$$

The kilogram is the fundamental unit on which are based all metric standards of mass. The liter is a secondary or derived unit of capacity or volume. The liter is larger by about 27 parts per million than the cube of the tenth of the meter, i. e., the cubic decimeter—that is, 1 liter = 1.000 027 cubic decimeters.

The conversion tables in this publication which involve the relative length of the yard and meter are based upon the relation:

$$1 \text{ meter} = 39.37 \text{ inches,}$$

contained in the act of Congress of 1866.<sup>5</sup> From this relation it follows that 1 inch = 25.400 05 millimeters (nearly).

<sup>4</sup>J. R. Benoit, C. Fabry, and A. Perot, Nouvelle détermination du rapport des longueurs d'onde fondamentales avec l'unité métrique. Trav. et Mém. Bur. Int. Poids et Mesures **15**, 131 (1913).

<sup>5</sup>United States Code, title 15, sec. 205.

In recent years engineering and industrial interests the world over have urged the adoption of the simpler relation, 1 inch=25.4 millimeters exactly, which differs from the preceding value by only 2 parts in a million. This simpler relation has not as yet been officially adopted by either Great Britain or the United States, but is in wide industrial use.<sup>6</sup>

### III. DEFINITIONS OF UNITS

#### 1. LENGTH

##### *Fundamental Units*

A meter (m) is a unit of length equal to the distance between the defining lines on the International Prototype Meter when this standard is at the temperature of melting ice ( $0^{\circ}\text{C}$ ).

A yard (yd) is a unit of length equal to  $\frac{3600}{3937}$  of a meter.

##### *Multiples and Submultiples*

1 kilometer (km)=1 000 meters.

1 hectometer (hm)=100 meters.

1 dekameter (dkm)=10 meters.

1 decimeter (dm)=0.1 meter.

1 centimeter (cm)=0.01 meter.

1 millimeter (mm)=0.001 meter.

1 micron ( $\mu$ )=0.000 001 meter=0.001 millimeter.

1 millimicron ( $m\mu$ )=0.000 000 001 meter=0.001 micron.

1 angstrom (A)  $\left\{ \begin{array}{l} =0.000\ 000\ 1\ \text{millimeter.} \\ =.000\ 1\ \text{micron.} \\ =.1\ \text{millimicron.} \end{array} \right.$

1 statute mile  $\left\{ \begin{array}{l} =8\ \text{furlongs}=320\ \text{rods.} \\ =1\ 760\ \text{yards}=5\ 280\ \text{feet.} \end{array} \right.$

1 furlong= $\frac{1}{8}$  mile=40 rods=220 yards=660 feet.

1 rod= $5\frac{1}{2}$  yards= $16\frac{1}{2}$  feet=25 links.

1 foot= $\frac{1}{3}$  yard=12 inches.

1 hand=4 inches.

1 inch= $\frac{1}{36}$  yard= $\frac{1}{12}$  foot.

1 line (button)= $\frac{1}{40}$  inch.

1 point (printers)= $\frac{1}{12}$  inch.

1 mil= $\frac{1}{1000}$  inch.

1 chain (Gunter's)=4 rods=22 yards=66 feet=100 links.

1 link (Gunter's)= $\frac{1}{100}$  chain=7.92 inches.

1 U. S. nautical mile  $\left\{ \begin{array}{l} =1\ 853.248\ \text{meters}=6\ 080.20\ \text{feet.} \\ =1\ \text{sea mile} \end{array} \right.$

1 geographical mile  $\left\{ \begin{array}{l} =1\ 853.248\ \text{meters}=6\ 080.20\ \text{feet.} \\ =1\ \text{international nautical mile} \end{array} \right.$

1 international nautical mile=1 852 meters=6 076.10 feet.

1 fathom=6 feet=8 spans.

1 span= $\frac{1}{8}$  fathom=9 inches.

#### 2. AREA

##### *Fundamental Units*

A square meter ( $\text{m}^2$ ) is a unit of area equal to the area of a square the sides of which are 1 meter.

A square yard (sq yd) is a unit of area equal to the area of a square the sides of which are 1 yard.

##### *Multiples and Submultiples*

1 square kilometer ( $\text{km}^2$ )=1 000 000 square meters.

1 hectare (ha), or square hectometer ( $\text{hm}^2$ )=10 000 square meters.

<sup>6</sup> Conversion tables (ASA B48.1-1933), computed on the basis of 1 inch=25.4 mm exactly, may be obtained from the American Standards Association, New York, N. Y.

1 are (a), or square dekameter ( $\text{dkm}^2$ )=100 square meters.

1 centare (ca)=1 square meter.

1 square decimeter ( $\text{dm}^2$ )=0.01 square meter.

1 square centimeter ( $\text{cm}^2$ )=0.000 1 square meter.

1 square millimeter ( $\text{mm}^2$ )=0.000 001 square meter.

1 square mile (sq mi)  $\begin{cases} =640 \text{ acres}=102\,400 \text{ square rods.} \\ =3\,097\,600 \text{ square yards}=27\,878\,400 \text{ square feet.} \end{cases}$

1 acre (acre) = 10 square chains  $\begin{cases} =160 \text{ square rods}=4\,840 \text{ square yards.} \\ =43\,560 \text{ square feet.} \end{cases}$

1 square chain (sq ch)  $\begin{cases} =16 \text{ square rods}=484 \text{ square yards}=4\,356 \text{ square feet.} \\ =10\,000 \text{ square links.} \end{cases}$

1 square link (sq li)  $\begin{cases} =0.000 1 \text{ square chain}=0.048 4 \text{ square yard.} \\ =0.435 6 \text{ square foot}=62.726 4 \text{ square inches.} \end{cases}$

1 square rod (sq rd)=30.25 square yards=272.25 square feet=625 square links.

1 square foot (sq ft)= $\frac{1}{9}$  square yard=144 square inches.

1 square inch (sq in.)= $\frac{1}{144}$  square yard= $\frac{1}{1296}$  square foot.

### 3. VOLUME

#### *Fundamental Units*

A cubic meter ( $\text{m}^3$ ) is a unit of volume equal to a cube the edges of which are 1 meter.

A cubic yard (cu yd) is a unit of volume equal to a cube the edges of which are 1 yard.

#### *Multiples and Submultiples*

1 cubic kilometer ( $\text{km}^3$ )=1 000 000 000 cubic meters.

1 cubic hectometer ( $\text{hm}^3$ )=1 000 000 cubic meters.

1 cubic dekameter ( $\text{dkm}^3$ )=1 000 cubic meters.

1 stere (s)=1 cubic meter.

1 cubic decimeter ( $\text{dm}^3$ )=0.001 cubic meter.

1 cubic centimeter ( $\text{cm}^3$ )=0.000 001 cubic meter=0.001 cubic decimeter.

1 cubic millimeter ( $\text{mm}^3$ )=0.000 000 001 cubic meter=0.001 cubic centimeter.

1 cubic foot (cu ft)= $\frac{1}{27}$  cubic yard.

1 cubic inch (cu in.)= $\frac{1}{466\,56}$  cubic yard= $\frac{1}{1728}$  cubic foot.

1 board foot (fbm)=144 cubic inches= $\frac{1}{2}$  cubic foot.

1 cord (cd)=128 cubic feet.

### 4. CAPACITY

#### *Fundamental Units*

A liter (liter) is a unit of capacity equal to the volume occupied by the mass of 1 kilogram of pure water at its maximum density (at a temperature of  $4^\circ \text{C}$ , practically) and under the standard atmospheric pressure (of 760 mm). It is equivalent in volume to 1.000 027 cubic decimeters.

A gallon (gal) is a unit of capacity equal to the volume of 231 cubic inches. It is used for the measurement of liquid commodities only.

A bushel (bu) is a unit of capacity equal to the volume of 2 150.42 cubic inches. It is used in the measurement of dry commodities only.<sup>7</sup>

#### *Multiples and Submultiples*

1 hectoliter (hl)=100 liters.

1 dekaliter (dkl)=10 liters.

1 deciliter (dl)=0.1 liter.

1 centiliter (cl)=0.01 liter.

<sup>7</sup> This is the so-called stricken or struck bushel. A heaped bushel for apples of 2 747.715 cubic inches was established by the U. S. Court of Customs Appeals on Feb. 15, 1912, in United States *v.* Weber (no. 757). A heaped bushel, equivalent to  $1\frac{1}{4}$  stricken bushels, is also recognized.

- 1 milliliter (ml)=0.001 liter=1.000 027 cubic centimeters.  
 1 liquid quart (liq qt)= $\frac{1}{4}$  gallon=57.75 cubic inches.  
 1 liquid pint (liq pt)= $\frac{1}{8}$  gallon= $\frac{1}{2}$  liquid quart=28.875 cubic inches.  
 1 gill (gi)= $\frac{1}{2}$  gallon= $\frac{1}{4}$  liquid pint=7.218 75 cubic inches.  
 1 fluid ounce (fl oz)= $\frac{1}{128}$  gallon= $\frac{1}{16}$  liquid pint.  
 1 fluid dram (fl dr)= $\frac{1}{6}$  fluid ounce= $\frac{1}{128}$  liquid pint.  
 1 minim (min or m)= $\frac{1}{60}$  fluid dram= $\frac{1}{480}$  fluid ounce.  
 1 peck (pk)= $\frac{1}{4}$  bushel=537.605 cubic inches.  
 1 dry quart (dry qt)= $\frac{1}{32}$  bushel= $\frac{1}{8}$  peck=67.200 625 cubic inches.  
 1 dry pint (dry pt)= $\frac{1}{64}$  bushel= $\frac{1}{2}$  dry quart=33.600 312 5 cubic inches.  
 1 barrel, for fruits, vegetables, and other dry commodities, other than cranberries,<sup>8</sup>=7 056 cubic inches=105 dry quarts.  
 1 barrel for cranberries=5 826 cubic inches.<sup>9</sup>

## 5. MASS

### Fundamental Units

A kilogram (kg) is a unit of mass equal to the mass of the International Prototype Kilogram.

A gram (g) is a unit of mass equal to one-thousandth of the mass of the International Prototype Kilogram.

An avoirdupois pound (lb avdp) is a unit of mass equal to 0.453 592 427 7 kilogram.

A troy pound (lb t) is a unit of mass equal to  $\frac{5760}{7000}$  of that of the avoirdupois pound.

### Multiples and Submultiples

- 1 metric ton (t)=1 000 kilograms.  
 1 hectogram (hg)=100 grams.  
 1 dekagram (dkg)=10 grams.  
 1 decigram (dg)=0.1 gram.  
 1 centigram (cg)=0.01 gram.  
 1 milligram (mg)=0.001 gram.  
 1 metric carat <sup>10</sup> (c)=200 milligrams=0.2 gram.  
 1 avoirdupois ounce (oz avdp)= $\frac{1}{16}$  avoirdupois pound=437.5 grains.  
 1 avoirdupois dram (dr avdp)= $\frac{1}{256}$  avoirdupois pound= $\frac{1}{16}$  avoirdupois ounce.  
 1 grain (grain)= $\frac{1}{7000}$  avoirdupois pound= $\frac{1}{5760}$  troy pound.  
 1 apothecaries' pound (lb ap)=1 troy pound= $\frac{5760}{7000}$  avoirdupois pound.  
 1 apothecaries' or troy ounce (oz ap or ʒ, oz t)= $\frac{1}{12}$  troy pound= $\frac{480}{7000}$  avoirdupois pound=480 grains.  
 1 apothecaries' dram (dr ap or ʒ)= $\frac{1}{16}$  apothecaries' pound= $\frac{1}{12}$  apothecaries' ounce=60 grains.  
 1 pennyweight (dwt)= $\frac{1}{20}$  troy ounce=24 grains.  
 1 apothecaries' scruple (s ap or ℥)= $\frac{1}{3}$  apothecaries' dram=20 grains.  
 1 short hundredweight (sh cwt)=100 avoirdupois pounds.  
 1 long hundredweight (l cwt)=112 avoirdupois pounds.  
 1 short ton (sh tn)=2 000 avoirdupois pounds.  
 1 long ton (l tn)=2 240 avoirdupois pounds.

## IV. STANDARDS OF MEASUREMENT

Units of measurement should be distinguished from standards of measurement. Units of length are fixed distances, independent of any other consideration, while length standards are affected by the expansion and contraction resulting from changes of temperature of the material of which the standard is composed. It is therefore

<sup>8</sup> As fixed by United States standard barrel act (United States Code, title 15, ch. 6, sec. 234).

<sup>9</sup> As computed from dimensions fixed by United States standard barrel act, see above.

<sup>10</sup> See Bureau of Standards Circular C48, The Metric Carat, for a discussion of the metric carat and tables of the relations of the metric carat to the old carat of 205.3 milligrams in use in this country previous to July 1, 1913.

necessary to fix upon some temperature at which the distance between the defining lines or end surfaces of the standards shall be equal to the unit. The same is true of standards of capacity, which at some definite temperature contain a given number of units of volume.

The recommended standard temperature for commercial and industrial length standards is 20° C (68° F). Some metric standards, especially those made in Europe until recently, are intended to be correct at 0° C. In the past some length standards graduated in the customary units have been made to be correct at 62° F (16.67° C).

For measurements of high precision it is also necessary to specify the manner of support of the standards, whether at certain points only or throughout their entire length, and in the case of tapes it is also necessary to give the tension applied to the tape when in use.

In the United States the capacity standards, both metric and customary, are made to hold the specified volumes at 4° C. Standards of capacity are usually made of brass and the capacity at any other temperature may be computed by the use of the coefficient of cubical expansion of that material usually assumed to be 0.000 054 per degree centigrade. In the purchase and sale of liquids a more important consideration than the temperature of the measures is the temperature of the liquid when measured, for the reason that the large coefficient of expansion of many liquids makes the actual mass of a given volume delivered vary considerably with temperature.

While the temperature of a weight does not affect its mass, it is nevertheless important that when two weights are compared in air they both be at the same temperature as the air. If there is a difference between the temperature of the air and the weights, convection currents will be set up and the readings of the balance will be thereby affected. Also, since weights are buoyed up by the surrounding air by amounts dependent upon their volumes, it is desirable that the weights of any set be of the same material. If two weights of the same density balance in air of a certain density they will balance in vacuo or in air of a different density.

Brass is the material most widely used for standard weights, although platinum and aluminum are quite commonly used for weights of 1 gram or less. In the absence of any knowledge as to the actual density of weights, those made of brass are assumed to have a density of 8.4 grams per cm<sup>3</sup> at 0° C, while those of platinum and of aluminum are assumed to have densities of 21.5 and 2.7 grams per cm<sup>3</sup>, respectively.

## V. SPELLING AND ABBREVIATION OF UNITS

The spelling of the names of units as adopted by the National Bureau of Standards is that given in the list below. The spelling of the metric units is in accordance with that given in the law of July 28, 1866, legalizing the metric system in the United States.

Following the name of each unit in the list below is given the abbreviation which the Bureau has adopted. Attention is particularly called to the following principles:

1. The period is omitted after all abbreviations of units, except where the abbreviation forms an English word.

2. The exponents “<sup>2</sup>” and “<sup>3</sup>” are used to signify “square” and “cubic”, respectively, in the case of the metric units, instead of the abbreviations “sq” or “cu”. In conformity with this principle the abbreviation for cubic centimeter is “cm<sup>3</sup>” (instead of “cc” or “c cm”). The term “cubic centimeter”, as used in chemical work, is, in fact, a misnomer, since the unit actually used is the “milliliter”, of which the correct abbreviation is “ml”. (See p. 4).

3. The use of the same abbreviation for both singular and plural is recommended. This practice is already established in expressing metric units and is in accordance with the spirit and chief purpose of abbreviations.

4. It is also suggested that, unless all the text is printed in capital letters, only small letters be used for abbreviations, except in such case as A for angstrom, etc., where the use of capital letters is general.

1. LIST OF THE MOST COMMON UNITS OF WEIGHT AND MEASURE AND THEIR ABBREVIATIONS

Unit	Abbreviation	Unit	Abbreviation	Unit	Abbreviation
acre	acre	dram, apothecaries'	dr ap or ʒ	ounce, avoirdupois	oz avdp
angstrom	A	dram, avoirdupois	dr avdp	ounce, fluid	fl oz
are	a	dram, fluid	fl dr	ounce, troy	oz t
avoirdupois	avdp	fathom	fath	peck	pk
barrel	bbl	foot	ft	pennyweight	dwt
board foot	fbm	furlong	fur.	pint	pt
bushel	bu	gallon	gal	pound	lb
carat	c	grain	grain	pound, apothecaries'	lb ap
centare	ca	gram	g	pound, avoirdupois	lb avdp
centigram	cg	hectare	ha	pound, troy	lb t
centiliter	cl	hectogram	hg	quart	qt
centimeter	cm	hectoliter	hl	rod	rd
chain	ch	hectometer	hm	scruple, apothecaries	s ap or ʒ
cubic centimeter	cm <sup>3</sup>	hogshead	hhd	square centimeter	cm <sup>2</sup>
cubic decimeter	dm <sup>3</sup>	hundredweight	cwt	square chain	sq ch
cubic dekameter	dkm <sup>3</sup>	inch	in.	square decimeter	dm <sup>2</sup>
cubic foot	cu ft	kilogram	kg	square dekameter	dkm <sup>2</sup>
cubic hectometer	hm <sup>3</sup>	kiloliter	kl	square foot	sq ft
cubic inch	cu in.	kilometer	km	square hectometer	hm <sup>2</sup>
cubic kilometer	km <sup>3</sup>	link	li	square inch	sq in.
cubic meter	m <sup>3</sup>	liquid	liq	square kilometer	km <sup>2</sup>
cubic mile	cu mi	liter	liter	square link	sq li
cubic millimeter	mm <sup>3</sup>	meter	m	square meter	m <sup>2</sup>
cubic yard	cu yd	metric ton	t	square mile	sq mi
decigram	dg	micron	μ	square millimeter	mm <sup>2</sup>
deciliter	dl	mile	mi	square rod	sq rd
decimeter	dm	milligram	mg	square yard	sq yd
decistere	ds	milliliter	ml	stere	s
dekagram	dkg	millimeter	mm	ton	tn
dekaliter	dkl	millimicron	mμ	ton, metric	t
dekameter	dkm	minim	min or ℥	troy	t
dekastere	dks	ounce	oz	yard	yd
dram	dr	ounce, apothecaries'	oz ap or ʒ		

## VI. TABLES OF INTERRELATION

## 1. UNITS OF

Units		Inches	Links	Feet	Yards	Rods
1 inch	=	1	0.126 263	0.083 333 3	0.027 777 8	0.005 050 51
1 link	=	7.92	1	0.66	0.22	0.04
1 foot	=	12	1.515 152	1	0.333 333	0.060 606 1
1 yard	=	36	4.545 45	3	1	0.181 818
1 rod	=	198	25	16.5	5.5	1
1 chain	=	792	100	66	22	4
1 mile	=	63 360	8000	5280	1760	320
1 centimeter	=	0.3937	0.049 709 60	0.032 808 33	0.010 936 111	0.001 988 384
1 meter	=	39.37	4.970 960	3.280 833	1.093 611 1	0.198 838 4

## 2. UNITS OF

Units	Square inches	Square links	Square feet	Square yards	Square rods	Square chains
1 square inch	=	1	0.015 942 3	0.006 944 44	0.000 771 605	0.000 025 507 6
1 square link	=	62.7264		1	0.0484	0.0016
1 square foot	=	144	2.295 684	1	0.111 111 1	0.003 673 09
1 square yard	=	1296	20.6612	9	1	0.033 057 85
1 square rod	=	39 204	625	272.25	30.25	1
1 square chain	=	627 264	10 000	4356	484	16
1 acre	=	6 272 640	100 000	43 560	4840	160
1 square mile	=	4 014 489 600	64 000 000	27 878 400	3 097 600	102 400
1 square centimeter	=	0.154 999 7	0.002 471 04	0.001 076 387	0.000 119 598 5	0.000 003 953 67
1 square meter	=	1549.9969	24.7104	10.763 87	1.195 985	0.039 536 7
1 hectare	=	15 499 969	247 104	107 638.7	11 959.85	395.367

## 3. UNITS OF

Units		Cubic inches	Cubic feet	Cubic yards
1 cubic inch	=	1	0.000 578 704	0.000 021 433 47
1 cubic foot	=	1728	1	0.037 037 0
1 cubic yard	=	46 656	27	1
1 cubic centimeter	=	0.061 023 38	0.000 035 314 45	0.000 001 307 94
1 cubic decimeter	=	61.023 38	0.035 314 45	0.001 307 943
1 cubic meter	=	61 023.38	35.314 45	1.307 942 8

## 4. UNITS OF CAPACITY

Units	Minims	Fluid drams	Fluid ounces	Gills	Liquid pints
1 minim	=	1	0.016 666 7	0.002 083 33	0.000 520 833
1 fluid dram	=	60	1	0.125	0.031 25
1 fluid ounce	=	480	8	1	0.25
1 gill	=	1920	32	4	1
1 liquid pint	=	7680	128	16	4
1 liquid quart	=	15 360	256	32	8
1 gallon	=	61 440	1024	128	32
1 milliliter	=	16.2311	0.270 518	0.033 814 7	0.008 453 68
1 liter	=	16 231.1	270.518	33.8147	8.453 68
1 cubic inch	=	265.974	4.432 90	0.554 113	0.138 528

## OF UNITS OF MEASUREMENT

### LENGTH

Chains	Miles	Centimeters	Meters	Units
0.001 262 63	0.000 015 782 8	2.540 005	0.025 400 05	=1 inch
<b>0.01</b>	<b>0.000 125</b>	20.116 84	0.201 168 4	=1 link
0.015 151 5	0.000 189 393 9	30.480 06	0.304 800 6	=1 foot
0.045 454 5	0.000 568 182	91.440 18	0.914 401 8	=1 yard
<b>0.25</b>	<b>0.003 125</b>	502.9210	5.029 210	=1 rod
<b>1</b>	<b>0.0125</b>	2011.684	20.116 84	=1 chain
<b>80</b>	<b>1</b>	160 934.72	1609.3472	=1 mile
0.000 497 096 0	0.000 006 213 699	1	0.01	=1 centimeter
0.049 709 60	0.000 621 369 9	100	1	=1 meter

### AREA

Acres	Square miles	Square centimeters	Square meters	Hectares	Units
0.000 000 159 423	0.000 000 000 219 1	6.451 626	0.000 645 162 6	0.000 000 064 516	=1 square inch
<b>0.000 01</b>	<b>0.000 000 015 625</b>	404.6873	0.040 468 73	0.000 004 046 87	=1 square link
0.000 022 956 8	0.000 000 035 870 1	929.0341	0.092 903 41	0.000 009 290 34	=1 square foot
0.000 206 612	0.000 000 322 831	8361.307	0.836 130 7	0.000 083 613 1	=1 square yard
<b>0.006 25</b>	<b>0.000 009 765 625</b>	252 929.5	25.292 95	0.002 529 295	=1 square rod
<b>0.1</b>	<b>0.000 156 25</b>	4 046 873	404.6873	0.040 468 7	=1 square chain
<b>1</b>	<b>0.001 562 5</b>	40 468 726	4046.873	0.404 687	=1 acre
<b>640</b>	<b>1</b>	25 899 984 703	2 589 998	258.9998	=1 square mile
0.000 000 024 710 4	0.000 000 000 038 610 06	1	<b>0.0001</b>	0.000 000 001	=1 square centimeter
0.000 247 104	0.000 000 386 100 6	10 000	1	0.0001	=1 square meter
2.471 04	0.003 861 006	100 000 000	10 000	1	=1 hectare

### VOLUME

Cubic centimeters	Cubic decimeters	Cubic meters	Units
16.387 162	0.016 387 16	0.000 016 387 16	=1 cubic inch
28 317.016	28.317 016	0.028 317 016	=1 cubic foot
764 559.4	764.5594	0.764 559 4	=1 cubic yard
<b>1</b>	<b>0.001</b>	<b>0.000 001</b>	=1 cubic centimeter
<b>1 000</b>	<b>1</b>	<b>0.001</b>	=1 cubic decimeter
<b>1 000 000</b>	<b>1000</b>	<b>1</b>	=1 cubic meter

### LIQUID MEASURE

Liquid quarts	Gallons	Milliliters	Liters	Cubic inches	Units
0.000 065 104	0.000 016 276	0.061 610 2	0.000 061 610 2	0.003 759 77	=1 minim
<b>0.003 906 25</b>	<b>0.000 976 562</b>	3.696 61	0.003 696 61	0.225 586	=1 fluid dram
<b>0.031 25</b>	<b>0.007 812 5</b>	29.5729	0.029 572 9	1.804 69	=1 fluid ounce
<b>0.125</b>	<b>0.031 25</b>	118.292	0.118 292	7.218 75	=1 gill
<b>0.5</b>	<b>0.125</b>	473.167	0.473 167	28.875	=1 liquid pint
<b>1</b>	<b>0.25</b>	946.333	0.946 333	57.75	=1 liquid quart
<b>4</b>	<b>1</b>	3785.332	3.785 332	231	=1 gallon
0.001 056 71	0.000 264 178	1	<b>0.001</b>	0.061 025 0	=1 milliliter
1.056 71	0.264 178	<b>1000</b>	<b>1</b>	61.0250	=1 liter
0.017 316 0	0.004 329 00	16.3867	0.016 386 7	<b>1</b>	=1 cubic inch

## 5. UNITS OF CAPACITY

Units	Dry pints	Dry quarts	Pecks	Bushels
1 dry pint =	1	0.5	0.0625	0.015 625
1 dry quart =	2	1	0.125	0.031 25
1 peck =	16	8	1	0.25
1 bushel =	64	32	4	1
1 liter =	1.816 20	0.908 102	0.113 513	0.028 378
1 dekaliter =	18.1620	9.081 02	1.135 13	0.283 78
1 cubic inch =	0.029 761 6	0.014 880 8	0.001 860 10	0.000 465 025

## 6. UNITS OF MASS LESS

Units *	Grains	Apothecaries' scruples	Pennyweights	Avoirdupois drams	Apothecaries' drams	Avoirdupois ounces
1 grain =	1	0.05	0.041 666 67	0.036 571 43	0.016 666 7	0.002 285 71
1 apoth. scruple =	20	1	0.833 333 3	0.731 428 6	0.333 333	0.045 714 3
1 pennyweight =	24	1.2	1	0.877 714 3	0.4	0.054 857 1
1 avoird. dram =	27.343 75	1.367 187 5	1.139 323	1	0.455 729 2	0.0625
1 apoth. dram =	60	3	2.5	2.194 286	1	0.137 142 9
1 avoird. ounce =	437.5	21.875	18.229 17	16	7.291 66	1
1 apoth. or troy ounce =	480	24	20	17.554 28	8	1.097 142 9
1 apoth. or troy pound =	5760	288	240	210.6514	96	13.165 714
1 avoird. pound =	7000	350	291.6667	256	116.6667	16
1 milligram =	0.015 432 356	0.000 771 618	0.000 643 014 8	0.000 564 383 3	0.000 257 205 9	0.000 035 273 96
1 gram =	15.432 356	0.771 618	0.643 014 85	0.564 383 3	0.257 205 9	0.035 273 96
1 kilogram =	15 432.356	.771. 6178	643.014 85	564.383 32	257.205 94	35.273 96

## 7. UNITS OF MASS

Units	Avoirdupois ounces	Avoirdupois pounds	Short hundred-weights	Short tons
1 avoirdupois ounce =	1	0.0625	0.000 625	0.000 031 25
1 avoirdupois pound =	16	1	0.01	0.0005
1 short hundredweight =	1600	100	1	0.05
1 short ton =	32 000	2000	20	1
1 long ton =	35 840	2240	22.4	1.12
1 kilogram =	35.273 957	2.204 622 34	0.022 046 223	0.001 102 311 2
1 metric ton =	35 273.957	2204.622 34	22.046 223	1.102 311 2

\* "Avoir," is now abbreviated "avdp".

## DRY MEASURE

Liters	Dekaliters	Cubic inches	Units
0.550 599	0.055 060	33.600 312 5	=1 dry pint
1.101 198	0.110 120	67.200 625	=1 dry quart
8.809 58	0.880 958	537.605	=1 peck
35.2383	3.523 83	2150.42	=1 bushel
1	0.1	61.0250	=1 liter
10	1	610.250	=1 dekaliter
0.016 386 7	0.001 638 67	1	=1 cubic inch

## THAN POUNDS AND KILOGRAMS

Apothecaries' or troy ounces	Apothecaries' or troy pounds	Avoirdupois pounds	Milligrams	Grams	Kilograms	Units
0.002 083 33	0.000 173 611 1	0.000 142 857 1	64.798 918	0.064 798 918	0.000 064 798 9	=1 grain
0.041 666 7	0.003 472 222	0.002 857 143	1295.9784	1.295 978 4	0.001 295 978	=1 apoth. scruple
<b>0.05</b>	0.004 166 667	0.003 428 571	1555.1740	1.555 174 0	0.001 555 174	=1 pennyweight
0.056 966 146	0.004 747 178 8	<b>0.003 906 25</b>	1771.8454	1.771 845 4	0.001 771 845	=1 avoir. dram
<b>0.125</b>	0.010 416 667	0.008 571 429	3887.9351	3.887 935 1	0.003 887 935	=1 apoth. dram
0.911 458 3	0.075 954 861	<b>0.0625</b>	28 349.527	28.349 527	0.028 349 53	=1 avoir. ounce
1	0.083 333 33	0.068 571 43	31 103.481	31.103 481	0.031 103 48	=1 apoth. or troy ounce
<b>12</b>	<b>1</b>	0.822 857 1	373 241.77	373.241 77	0.373 241 77	=1 apoth. or troy pound
14.583 333	1.215 277 8	<b>1</b>	<b>453 592 4277</b>	<b>453.592 4277</b>	<b>0.453 592 427 7</b>	=1 avoir. pound
0.000 032 150 74	0.000 002 679 23	0.000 002 204 62	<b>1</b>	<b>0.001</b>	<b>0.000 001</b>	=1 milligram
0.032 150 74	0.002 679 23	0.002 204 62	<b>1000</b>	<b>1</b>	<b>0.001</b>	=1 gram
32.150 742	2.679 228 5	2.204 622 341	<b>1 000 000</b>	<b>1000</b>	<b>1</b>	=1 kilogram

## GREATER THAN AVOIRDUPOIS OUNCES

Long tons	Kilograms	Metric tons	Units
0.000 027 901 79	0.028 349 53	0.000 028 349 53	=1 avoirdupois ounce
0.000 446 428 6	<b>0.453 592 427 7</b>	0.000 453 592 43	=1 avoirdupois pound
0.044 642 86	45.359 243	0.045 359 243	=1 short hundredweight
0.892 857 1	907.184 86	0.907 184 86	=1 short ton
1	1016.047 04	1.016 047 04	=1 long ton
0.000 984 206 4	<b>1</b>	<b>0.001</b>	=1 kilogram
0.984 206 40	<b>1000</b>	<b>1</b>	=1 metric ton

## VII. COMPARISON OF METRIC AND CUSTOMARY UNITS FROM 1 TO 9

## 1. LENGTH

Inches (in.)	Milli-meters (mm)	Feet (ft)	Meters (m)	Yards (yd)	Meters (m)	Rods (rd)	Meters (m)	U.S. miles (mi)	Kilometers (km)
1 = 25.4001		1 = 0.304 801		1 = 0.914 402		1 = 5.029 21		1 = 1.609 347	
2 = 50.8001		2 = 0.609 601		2 = 1.828 804		2 = 10.058 42		2 = 3.218 694	
3 = 76.2002		3 = 0.914 402		3 = 2.743 205		3 = 15.087 63		3 = 4.828 042	
4 = 101.6002		4 = 1.219 202		4 = 3.657 607		4 = 20.116 84		4 = 6.437 389	
5 = 127.0003		5 = 1.524 003		5 = 4.572 009		5 = 25.146 05		5 = 8.046 736	
6 = 152.4003		6 = 1.828 804		6 = 5.486 411		6 = 30.175 26		6 = 9.656 083	
7 = 177.8004		7 = 2.133 604		7 = 6.400 813		7 = 35.204 47		7 = 11.265 431	
8 = 203.2004		8 = 2.438 405		8 = 7.313 215		8 = 40.233 68		8 = 12.874 778	
9 = 228.6005		9 = 2.743 205		9 = 8.229 616		9 = 45.262 89		9 = 14.484 125	
0.039 37=1		3.280 83=1		1.093 611=1		0.198 838=1		0.621 370=1	
0.078 74=2		6.561 67=2		2.187 222=2		0.397 677=2		1.242 740=2	
0.118 11=3		9.842 50=3		3.280 833=3		0.596 515=3		1.864 110=3	
0.157 48=4		13.123 33=4		4.374 444=4		0.795 354=4		2.485 480=4	
0.196 85=5		16.404 17=5		5.468 056=5		0.994 192=5		3.106 850=5	
0.236 22=6		19.685 00=6		6.561 667=6		1.193 030=6		3.728 220=6	
0.275 59=7		22.965 83=7		7.655 278=7		1.391 869=7		4.349 590=7	
0.314 96=8		26.246 67=8		8.748 889=8		1.590 707=8		4.970 960=8	
0.354 33=9		29.527 50=9		9.842 500=9		1.789 545=9		5.592 330=9	

## 2. AREA

Square inches (sq in.)	Square centimeters (cm <sup>2</sup> )	Square feet (sq ft)	Square meters (m <sup>2</sup> )	Square yards (sq yd)	Square meters (m <sup>2</sup> )	Acres (acre)	Hectares (ha)	Square miles (sq mi)	Square kilometers (km <sup>2</sup> )
1 = 6.452		1 = 0.092 90		1 = 0.8361		1 = 0.4047		1 = 2.5900	
2 = 12.903		2 = 0.185 81		2 = 1.6723		2 = 0.8094		2 = 5.1800	
3 = 19.355		3 = 0.278 71		3 = 2.5084		3 = 1.2141		3 = 7.7700	
4 = 25.807		4 = 0.371 61		4 = 3.3445		4 = 1.6187		4 = 10.3600	
5 = 32.258		5 = 0.464 52		5 = 4.1807		5 = 2.0234		5 = 12.9500	
6 = 38.710		6 = 0.557 42		6 = 5.0168		6 = 2.4281		6 = 15.5400	
7 = 45.161		7 = 0.650 32		7 = 5.8529		7 = 2.8328		7 = 18.1300	
8 = 51.613		8 = 0.743 23		8 = 6.6890		8 = 3.2375		8 = 20.7200	
9 = 58.065		9 = 0.836 13		9 = 7.5252		9 = 3.6422		9 = 23.3100	
0.155 00=1		10.764=1		1.1960=1		2.471=1		0.3861=1	
0.310 00=2		21.528=2		2.3920=2		4.942=2		0.7722=2	
0.465 00=3		32.292=3		3.5880=3		7.413=3		1.1583=3	
0.620 00=4		43.055=4		4.7839=4		9.884=4		1.5444=4	
0.775 00=5		53.819=5		5.9799=5		12.355=5		1.9305=5	
0.930 00=6		64.583=6		7.1759=6		14.826=6		2.3166=6	
1.085 00=7		75.347=7		8.3719=7		17.297=7		2.7027=7	
1.240 00=8		86.111=8		9.5679=8		19.768=8		3.0888=8	
1.395 00=9		96.875=9		10.7639=9		22.239=9		3.4749=9	

## 3. VOLUME

Cubic inches (cu in.)	Cubic centimeters (cm <sup>3</sup> )	Cubic feet (cu ft)	Cubic meters (m <sup>3</sup> )	Cubic yards (cu yd)	Cubic meters (m <sup>3</sup> )	Cubic inches (cu in.)	Liters (liter)	Cubic feet (cu ft)	Liters (liter)
1 = 16.3872		1 = 0.028 317		1 = 0.7646		1 = 0.016 386 7		1 = 28.316	
2 = 32.7743		2 = 0.056 634		2 = 1.5291		2 = 0.032 773 4		2 = 56.633	
3 = 49.1615		3 = 0.084 951		3 = 2.2937		3 = 0.049 160 2		3 = 84.949	
4 = 65.5486		4 = 0.113 268		4 = 3.0582		4 = 0.065 546 9		4 = 113.265	
5 = 81.9358		5 = 0.141 585		5 = 3.8228		5 = 0.081 933 6		5 = 141.581	
6 = 98.3230		6 = 0.169 902		6 = 4.5874		6 = 0.098 320 3		6 = 169.898	
7 = 114.7101		7 = 0.198 219		7 = 5.3519		7 = 0.114 707 0		7 = 198.214	
8 = 131.0973		8 = 0.226 536		8 = 6.1165		8 = 0.131 093 8		8 = 226.530	
9 = 147.4845		9 = 0.254 853		9 = 6.8810		9 = 0.147 480 5		9 = 254.846	
0.061 02=1		35.314=1		1.3079=1		61.025=1		0.035 315=1	
0.122 05=2		70.629=2		2.6159=2		122.050=2		0.070 631=2	
0.183 07=3		105.943=3		3.9238=3		183.075=3		0.105 946=3	
0.244 09=4		141.258=4		5.2318=4		244.100=4		0.141 262=4	
0.305 12=5		176.572=5		6.5397=5		305.125=5		0.176 577=5	
0.366 14=6		211.887=6		7.8477=6		366.150=6		0.211 892=6	
0.427 16=7		247.201=7		9.1556=7		427.175=7		0.247 208=7	
0.488 19=8		282.516=8		10.4635=8		488.200=8		0.282 523=8	
0.549 21=9		317.830=9		11.7715=9		549.225=9		0.317 839=9	

## 4. CAPACITY—LIQUID MEASURE

U. S. fluid drams (fl dr)	Milliliters (ml)	U. S. fluid ounces (fl oz)	Milliliters (ml)	U. S. liquid pints (pt)	Liters (liter)	U. S. liquid quarts (qt)	Liters (liter)	U. S. gallons (gal)	Liters (liter)
1 = 3. 6966		1 = 29. 573		1 = 0. 473 17		1 = 0. 946 33		1 = 3. 785 33	
2 = 7. 3932		2 = 59. 146		2 = 0. 946 33		2 = 1. 892 67		2 = 7. 570 66	
3 = 11. 0898		3 = 88. 719		3 = 1. 419 50		3 = 2. 839 00		3 = 11. 356 00	
4 = 14. 7865		4 = 118. 292		4 = 1. 892 67		4 = 3. 785 33		4 = 15. 141 33	
5 = 18. 4831		5 = 147. 865		5 = 2. 365 83		5 = 4. 731 67		5 = 18. 926 66	
6 = 22. 1797		6 = 177. 437		6 = 2. 839 00		6 = 5. 678 00		6 = 22. 711 99	
7 = 25. 8763		7 = 207. 010		7 = 3. 312 17		7 = 6. 624 33		7 = 26. 497 33	
8 = 29. 5729		8 = 236. 583		8 = 3. 785 33		8 = 7. 570 66		8 = 30. 282 66	
9 = 33. 2695		9 = 266. 156		9 = 4. 258 50		9 = 8. 517 00		9 = 34. 067 99	
0. 270 52 = 1		0. 033 815 = 1		2. 1134 = 1		1. 056 71 = 1		0. 264 18 = 1	
0. 541 04 = 2		0. 067 629 = 2		4. 2268 = 2		2. 113 42 = 2		0. 528 36 = 2	
0. 811 55 = 3		0. 101 444 = 3		6. 3403 = 3		3. 170 13 = 3		0. 792 53 = 3	
1. 082 07 = 4		0. 135 259 = 4		8. 4537 = 4		4. 226 84 = 4		1. 056 71 = 4	
1. 352 59 = 5		0. 169 074 = 5		10. 5671 = 5		5. 283 55 = 5		1. 320 89 = 5	
1. 623 11 = 6		0. 202 888 = 6		12. 6805 = 6		6. 340 26 = 6		1. 585 07 = 6	
1. 893 63 = 7		0. 236 703 = 7		14. 7939 = 7		7. 396 97 = 7		1. 849 24 = 7	
2. 164 14 = 8		0. 270 518 = 8		16. 9074 = 8		8. 453 68 = 8		2. 113 42 = 8	
2. 434 66 = 9		0. 304 333 = 9		19. 0208 = 9		9. 510 39 = 9		2. 377 60 = 9	

## 5. CAPACITY—DRY MEASURE

U. S. dry quarts (qt)	Liters (liter)	U. S. pecks (pk)	Liters (liter)	U. S. pecks (pk)	Dekaliters (dkl)	U. S. bushels (bu)	Hecto- liters (hl)	U. S. bushels per acre	Hecto- liters per hectare
1 = 1. 1012		1 = 8. 810		1 = 0. 8810		1 = 0. 352 38		1 = 0. 8708	
2 = 2. 2024		2 = 17. 619		2 = 1. 7619		2 = 0. 704 77		2 = 1. 7415	
3 = 3. 3036		3 = 26. 429		3 = 2. 6429		3 = 1. 057 15		3 = 2. 6123	
4 = 4. 4048		4 = 35. 238		4 = 3. 5238		4 = 1. 409 53		4 = 3. 4830	
5 = 5. 5060		5 = 44. 048		5 = 4. 4048		5 = 1. 761 92		5 = 4. 3538	
6 = 6. 6072		6 = 52. 857		6 = 5. 2857		6 = 2. 114 30		6 = 5. 2245	
7 = 7. 7084		7 = 61. 667		7 = 6. 1667		7 = 2. 466 68		7 = 6. 0953	
8 = 8. 8096		8 = 70. 477		8 = 7. 0477		8 = 2. 819 07		8 = 6. 9660	
9 = 9. 9108		9 = 79. 286		9 = 7. 9286		9 = 3. 171 45		9 = 7. 8368	
0. 9081 = 1		0. 113 51 = 1		1. 1351 = 1		2. 8378 = 1		1. 1484 = 1	
1. 8162 = 2		0. 227 03 = 2		2. 2703 = 2		5. 6756 = 2		2. 2969 = 2	
2. 7243 = 3		0. 340 54 = 3		3. 4054 = 3		8. 5135 = 3		3. 4453 = 3	
3. 6324 = 4		0. 454 05 = 4		4. 5405 = 4		11. 3513 = 4		4. 5937 = 4	
4. 5405 = 5		0. 567 56 = 5		5. 6756 = 5		14. 1891 = 5		5. 7421 = 5	
5. 4486 = 6		0. 681 08 = 6		6. 8108 = 6		17. 0269 = 6		6. 8906 = 6	
6. 3567 = 7		0. 794 59 = 7		7. 9459 = 7		19. 8647 = 7		8. 0390 = 7	
7. 2648 = 8		0. 908 10 = 8		8. 0810 = 8		22. 7026 = 8		9. 1874 = 8	
8. 1729 = 9		1. 021 61 = 9		10. 2161 = 9		25. 5404 = 9		10. 3359 = 9	

## 6. MASS

Grains	Grams (gram)	Apothe- caries' drams (dr ap or ʒ)	Grams (g)	Troy ounces (oz t)	Grams (g)	Avoirdou- pois ounces (oz avdp)	Grams (g)	Avoirdou- pois pounds (lb avdp)	Kilo- grams (kg)
1 = 0. 064 799		1 = 3. 8879		1 = 31. 103		1 = 28. 350		1 = 0. 453 59	
2 = 0. 129 598		2 = 7. 7759		2 = 62. 207		2 = 56. 699		2 = 0. 907 18	
3 = 0. 194 397		3 = 11. 6638		3 = 93. 310		3 = 85. 049		3 = 1. 360 78	
4 = 0. 259 196		4 = 15. 5517		4 = 124. 414		4 = 113. 398		4 = 1. 814 37	
5 = 0. 323 995		5 = 19. 4397		5 = 155. 517		5 = 141. 748		5 = 2. 267 96	
6 = 0. 388 794		6 = 23. 3276		6 = 186. 621		6 = 170. 097		6 = 2. 721 55	
7 = 0. 453 592		7 = 27. 2155		7 = 217. 724		7 = 198. 447		7 = 3. 175 15	
8 = 0. 518 391		8 = 31. 1035		8 = 248. 828		8 = 225. 796		8 = 3. 628 74	
9 = 0. 583 190		9 = 34. 9914		9 = 279. 931		9 = 255. 146		9 = 4. 082 33	
15. 4324 = 1		0. 257 21 = 1		0. 032 151 = 1		0. 035 274 = 1		2. 204 62 = 1	
30. 8647 = 2		0. 514 41 = 2		0. 064 301 = 2		0. 070 548 = 2		4. 409 24 = 2	
46. 2971 = 3		0. 771 62 = 3		0. 096 452 = 3		0. 105 822 = 3		6. 613 87 = 3	
61. 7294 = 4		1. 028 82 = 4		0. 128 603 = 4		0. 141 096 = 4		8. 818 49 = 4	
77. 1618 = 5		1. 286 03 = 5		0. 160 754 = 5		0. 176 370 = 5		11. 023 11 = 5	
92. 5941 = 6		1. 543 24 = 6		0. 192 904 = 6		0. 211 644 = 6		13. 227 73 = 6	
108. 0265 = 7		1. 800 44 = 7		0. 225 055 = 7		0. 246 918 = 7		15. 432 36 = 7	
123. 4589 = 8		2. 057 65 = 8		0. 257 206 = 8		0. 282 192 = 8		17. 636 98 = 8	
138. 8912 = 9		2. 314 85 = 9		0. 289 357 = 9		0. 317 466 = 9		19. 841 60 = 9	

7. COMPARISON OF THE VARIOUS TONS AND POUNDS IN USE IN THE UNITED STATES (FROM 1 TO 9 UNITS)

Troy pounds	Avoirdupois pounds	Kilograms	Short tons	Long tons	Metric tons
1	0.822 857	0.373 24	0.000 411 43	0.000 367 35	0.000 373 24
2	1.645 71	0.746 48	0.000 822 86	0.000 734 69	0.000 746 48
3	2.468 57	1.119 73	0.001 234 29	0.001 102 04	0.001 119 73
4	3.291 43	1.492 97	0.001 645 71	0.001 469 39	0.001 492 97
5	4.114 29	1.866 21	0.002 057 14	0.001 836 73	0.001 866 21
6	4.937 14	2.239 45	0.002 468 57	0.002 204 08	0.002 239 45
7	5.760 00	2.612 69	0.002 880 00	0.002 571 43	0.002 612 69
8	6.582 86	2.985 93	0.003 291 43	0.002 938 78	0.002 985 93
9	7 405 71	3.359 18	0.003 702 86	0.003 306 12	0.003 359 18
1. 215 28	1	0.453 59	0.0005	0.000 446 43	0.000 453 59
2. 430 56	2	0.907 18	0.0010	0.000 892 86	0.000 907 18
3. 645 83	3	1.360 78	0.0015	0.001 339 29	0.001 360 78
4. 861 11	4	1.814 37	0.0020	0.001 785 71	0.001 814 37
6. 076 39	5	2.267 96	0.0025	0.002 232 14	0.002 267 96
7. 291 67	6	2.721 55	0.0030	0.002 678 57	0.002 721 55
8. 506 94	7	3.175 15	0.0035	0.003 125 00	0.003 175 15
9. 722 22	8	3.628 74	0.0040	0.003 571 43	0.003 628 74
10. 937 50	9	4.082 33	0.0045	0.004 017 86	0.004 082 33
2. 679 23	2. 204 62	1	0.001 102 31	0.000 984 21	0.001
5. 358 46	4. 409 24	2	0.002 204 62	0.001 968 41	0.002
8. 037 69	6. 613 87	3	0.003 306 93	0.002 952 62	0.003
10. 716 91	8. 818 49	4	0.004 409 24	0.003 936 83	0.004
13. 396 14	11. 023 11	5	0.005 511 56	0.004 921 03	0.005
16. 075 37	13. 227 73	6	0.006 613 87	0.005 905 24	0.006
18. 754 60	15. 432 36	7	0.007 716 18	0.006 889 44	0.007
21. 433 83	17. 636 98	8	0.008 818 49	0.007 873 65	0.008
24. 113 06	19. 841 60	9	0.009 920 80	0.008 857 86	0.009
2430. 56	2000	907. 18	1	0.892 86	0.907 18
4861. 11	4000	1814. 37	2	1.785 71	1.814 37
7291. 67	6000	2721. 55	3	2.678 57	2.721 55
9722. 22	8000	3628. 74	4	3.571 43	3.628 74
12. 152. 78	10 000	4535. 92	5	4.464 29	4.535 92
14. 583. 33	12 000	5443. 11	6	5.357 14	5.443 11
17. 013. 89	14 000	6350. 29	7	6.250 00	6.350 29
19. 444. 44	16 000	7257. 48	8	7.142 86	7.257 48
21. 875. 00	18 000	8164. 66	9	8.035 71	8.164 66
2722. 22	2240	1016. 05	1.12	1	1.016 05
5444. 44	4480	2032. 09	2.24	2	2.032 09
8166. 67	6720	3048. 14	3.36	3	3.048 14
10. 888. 89	8960	4064. 19	4.48	4	4.064 19
13. 611. 11	11 200	5080. 24	5.60	5	5.080 24
16. 333. 33	13 440	6096. 28	6.72	6	6.096 28
19. 055. 56	15 680	7112. 32	7.84	7	7.112 32
21. 777. 78	17 920	8128. 38	8.96	8	8.128 38
24. 500. 00	20 160	9144. 42	10.08	9	9.144 42
2679. 23	2204. 62	1000	1.102 31	0.984 21	1
5358. 46	4409. 24	2000	2.204 62	1.968 41	2
8037. 69	6613. 87	3000	3.306 93	2.952 62	3
10. 716. 91	8818. 49	4000	4.409 24	3.936 83	4
13. 396. 14	11 023. 11	5000	5.511 56	4.921 03	5
16. 075. 37	13 227. 73	6000	6.613 87	5.905 24	6
18. 754. 60	15 432. 36	7000	7.716 18	6.889 44	7
21. 433. 83	17 636. 98	8000	8.818 49	7.873 65	8
24. 113. 06	19 841. 60	9000	9.920 80	8.857 86	9

## VIII. SPECIAL TABLES

## LENGTH—INCHES AND MILLIMETERS—EQUIVALENTS OF DECIMAL AND BINARY FRACTIONS OF AN INCH IN MILLIMETERS

From 1/64 to 1 Inch

$\frac{1}{2}$ 's	$\frac{1}{4}$ 's	8ths	16ths	32ds	64ths	Millimeters	Decimals of an inch	Inch	$\frac{1}{2}$ 's	$\frac{1}{4}$ 's	8ths	16ths	32ds	64ths	Millimeters	Decimals of an inch	
						1	= 0.397	0.015625							33	= 13.097	0.515625
						2	= .794	.03125							34	= 13.494	.53125
						3	= 1.191	.046875							35	= 13.891	.546875
						4	= 1.588	.0625							36	= 14.288	.5625
						5	= 1.984	.078125							37	= 14.684	.578125
						6	= 2.381	.09375							38	= 15.081	.59375
						7	= 2.778	.109375							39	= 15.478	.609375
						8	= 3.175	.1250							40	= 15.875	.625
						9	= 3.572	.140625							41	= 16.272	.640625
						10	= 3.969	.15625							42	= 16.669	.65625
						11	= 4.366	.171875							43	= 17.066	.671875
						12	= 4.763	.1875							44	= 17.463	.6875
						13	= 5.159	.203125							45	= 17.859	.703125
						14	= 5.556	.21875							46	= 18.256	.71875
						15	= 5.953	.234375							47	= 18.653	.734375
						16	= 6.350	.2500							48	= 19.050	.75
						17	= 6.747	.265625							49	= 19.447	.765625
						18	= 7.144	.28125							50	= 19.844	.78125
						19	= 7.541	.296875							51	= 20.241	.796875
						20	= 7.938	.3125							52	= 20.638	.8125
						21	= 8.334	.328125							53	= 21.034	.828125
						22	= 8.731	.34375							54	= 21.431	.84375
						23	= 9.128	.359375							55	= 21.828	.859375
						24	= 9.525	.3750							56	= 22.225	.875
						25	= 9.922	.390625							57	= 22.622	.890625
						26	= 10.319	.40625							58	= 23.019	.90625
						27	= 10.716	.421875							59	= 23.416	.921875
						28	= 11.113	.4375							60	= 23.813	.9375
						29	= 11.509	.453125							61	= 24.209	.953125
						30	= 11.906	.46875							62	= 24.606	.96875
						31	= 12.303	.484375							63	= 25.003	.984375
1	2	4	8	16	32	= 12.700	.5		1	2	4	8	16	32	64	= 25.400	1.000

## LENGTH—HUNDREDTHS OF AN INCH TO MILLIMETERS

From 1 to 99 Hundredths

Hundredths of an inch	0	1	2	3	4	5	6	7	8	9
10	0	0.254	0.508	0.762	1.016	1.270	1.524	1.778	2.032	2.286
20	2.540	2.794	3.048	3.302	3.556	3.810	4.064	4.318	4.572	4.826
30	5.080	5.334	5.588	5.842	6.096	6.350	6.604	6.858	7.112	7.366
40	7.620	7.874	8.128	8.382	8.636	8.890	9.144	9.398	9.652	9.906
50	10.160	10.414	10.668	10.922	11.176	11.430	11.684	11.938	12.192	12.446
60	12.700	12.954	13.208	13.462	13.716	13.970	14.224	14.478	14.732	14.986
70	15.240	15.494	15.748	16.002	16.256	16.510	16.764	17.018	17.272	17.526
80	17.780	18.034	18.288	18.542	18.796	19.050	19.304	19.558	19.812	20.066
90	20.320	20.574	20.828	21.082	21.336	21.590	21.844	22.098	22.352	22.606
	22.860	23.114	23.368	23.622	23.876	24.130	24.384	24.638	24.892	25.146

## LENGTH—MILLIMETERS TO DECIMALS OF AN INCH

From 1 to 99 Units

Millimeters	0	1	2	3	4	5	6	7	8	9
10	0	0.03937	0.07874	0.11811	0.15748	0.19685	0.23622	0.27559	0.31496	0.35433
20	0.39370	0.43307	0.47244	0.51181	0.55118	0.59055	0.62992	0.66929	0.70866	0.74803
30	0.78740	0.82677	0.86614	0.90551	0.94488	0.98425	1.02362	1.06299	1.10236	1.14173
40	1.18110	1.22047	1.25984	1.29921	1.33858	1.37795	1.41732	1.45669	1.49606	1.53543
50	1.57480	1.61417	1.65354	1.69291	1.73228	1.77165	1.81102	1.85039	1.88976	1.92913
60	1.96850	2.00787	2.04724	2.08661	2.12598	2.16535	2.20407	2.24409	2.28346	2.32283
70	2.36220	2.40157	2.44094	2.48031	2.51968	2.55905	2.59842	2.63779	2.67716	2.71653
80	2.75590	2.79527	2.83464	2.87401	2.91338	2.95275	2.99212	3.03149	3.07086	3.11023
90	3.14960	3.18897	3.22834	3.26771	3.30708	3.34645	3.38582	3.42519	3.46456	3.50393
	3.54330	3.58267	3.62204	3.66141	3.70078	3.74015	3.77952	3.81889	3.85826	3.89763

# LENGTH—UNITED STATES NAUTICAL MILES, INTERNATIONAL NAUTICAL MILES, AND KILOMETERS

Basic relations:  
 1 U. S. nautical mile = 1.853 248 kilometers.  
 1 International nautical mile = 1.852 kilometers.  
 1 U. S. nautical mile = 1,000 673.9 int. nautical miles.

U. S. nautical miles	Int. nautical miles	Kilometers	U. S. nautical miles	Int. nautical miles	Kilometers	U. S. nautical miles	Int. nautical miles	Kilometers
0			0			0		
1	1.0007	1.8532	0.9993	1	1.8520	0.9996	0.5400	0
2	2.0013	3.7065	1.9987	2	3.7040	1.9792	1.0799	1
3	3.0020	5.5597	2.9980	3	5.5560	1.6188	1.6199	2
4	4.0027	7.4130	3.9973	4	7.4080	2.1584	2.1598	3
5	5.0034	9.2662	4.9966	5	9.2600	2.6980	2.6998	4
6	6.0040	11.1195	5.9960	6	11.1120	3.2376	3.2397	5
7	7.0047	12.9727	6.9953	7	12.9640	3.7772	3.7797	6
8	8.0054	14.8260	7.9946	8	14.8160	4.3167	4.3197	7
9	9.0061	16.6792	8.9939	9	16.6680	4.8563	4.8596	8
10	10.0067	18.5325	9.9933	10	18.5200	5.3959	5.3996	9
11	11.0074	20.3857	10.9926	11	20.3720	5.9355	5.9395	10
12	12.0081	22.2390	11.9919	12	22.2240	6.4751	6.4795	11
13	13.0088	24.0922	12.9912	13	24.0760	7.0147	7.0194	12
14	14.0094	25.9455	13.9906	14	25.9280	7.5543	7.5594	13
15	15.0101	27.7987	14.9899	15	27.7800	8.0939	8.0994	14
16	16.0108	29.6520	15.9892	16	29.6320	8.6335	8.6393	15
17	17.0115	31.5052	16.9886	17	31.4840	9.1731	9.1793	16
18	18.0121	33.3585	17.9879	18	33.3360	9.7127	9.7192	17
19	19.0128	35.2117	18.9872	19	35.1880	10.2523	10.2592	18
20	20.0135	37.0650	19.9865	20	37.0400	10.7919	10.7991	19
21	21.0142	38.9182	20.9859	21	38.8920	11.3315	11.3391	20
22	22.0148	40.7715	21.9852	22	40.7440	11.8711	11.8790	21
23	23.0155	42.6247	22.9845	23	42.5060	12.4106	12.4190	22
24	24.0162	44.4780	23.9838	24	44.4480	12.9502	12.9590	23
25	25.0168	46.3312	24.9832	25	46.3000	13.4898	13.4989	24
26	26.0175	48.1844	25.9825	26	48.1520	14.0294	14.0389	25
27	27.0182	50.0377	26.9818	27	50.0040	14.5690	14.5788	26
28	28.0189	51.8909	27.9811	28	51.8560	15.1086	15.1188	27
29	29.0195	53.7442	28.9805	29	53.7080	15.6482	15.6587	28
30	30.0202	55.5974	29.9798	30	55.5600	16.1878	16.1987	29
31	31.0209	57.4507	30.9791	31	57.4120	16.774	16.7837	30
32	32.0216	59.3039	31.9785	32	59.2640	17.2670	17.2786	31
33	33.0222	61.1572	32.9778	33	61.1160	17.8066	17.8186	32
34	34.0229	63.0104	33.9771	34	62.9680	18.3462	18.3585	33
35	35.0236	64.8637	34.9764	35	64.8200	18.8858	18.8985	34
36	36.0243	66.7169	35.9758	36	66.6720	19.4384	19.4484	35
37	37.0249	68.5702	36.9751	37	68.5240	19.9649	19.9784	36
38	38.0256	70.4234	37.9744	38	70.3760	20.5045	20.5184	37
39	39.0263	72.2767	38.9737	39	72.2280	21.0441	21.0583	38
40	40.0270	75.1299	39.9731	40	74.0800	21.5837	21.5983	39
41	41.0276	75.9832	40.9724	41	75.9320	22.1233	22.1382	40
42	42.0283	77.8364	41.9717	42	77.7840	22.6629	22.6782	41
43	43.0290	79.6897	42.9710	43	79.6360	23.2025	23.2181	42
44	44.0297	81.5429	43.9704	44	81.4880	23.7421	23.7581	43
45	45.0303	83.3962	44.9697	45	83.3400	24.2817	24.2981	44
46	46.0310	85.2494	45.9690	46	85.1920	24.5213	24.5380	45
47	47.0317	87.1027	46.9683	47	87.0440	25.3609	25.3780	46
48	48.0323	88.9559	47.9677	48	88.8960	25.6005	25.6179	47
49	49.0330	90.8092	48.9670	49	90.7480	26.4401	26.4579	48

50	1	49. 9663	92. 6000	26. 9797
51	1	50. 0337	92. 6624	27. 5133
52	1	51. 0344	50. 5156	27. 5278
53	2	52. 0350	51. 9657	28. 0778
54	3	53. 0357	96. 3689	28. 0588
55	4	54. 0364	98. 2221	28. 6177
56	5	55. 0371	100. 0754	29. 1380
57	6	56. 0377	101. 9286	29. 1577
58	7	57. 0384	103. 7819	29. 6776
59	8	58. 0391	105. 6351	30. 2376
60	9	60. 0404	107. 4884	30. 7775
61	1	61. 0411	111. 1949	31. 3175
62	2	62. 0418	113. 0481	31. 8575
63	3	63. 0425	61. 9014	32. 3756
64	4	64. 0431	114. 7546	32. 3974
65	5	65. 0438	120. 4611	32. 9152
66	6	66. 0445	122. 3144	33. 4773
67	7	67. 0452	124. 1676	33. 4548
68	8	68. 0458	126. 0209	33. 9944
69	9	69. 0465	127. 8741	34. 0173
70	1	70. 0472	129. 7274	34. 5572
71	2	71. 0478	133. 5806	35. 0736
72	3	72. 0485	133. 4339	35. 6371
73	4	73. 0492	135. 2871	36. 1771
74	5	74. 0499	137. 1404	36. 7171
75	6	75. 0505	138. 9936	36. 7171
76	7	76. 0512	140. 8468	37. 2570
77	8	77. 0519	142. 7001	37. 7715
78	9	78. 0526	144. 5533	38. 3369
79	1	79. 0532	146. 4066	38. 8769
80	2	80. 0539	148. 2598	39. 3903
81	3	81. 0546	150. 1131	39. 4168
82	4	82. 0553	151. 9663	39. 9299
83	5	83. 0559	153. 8196	40. 4968
84	6	84. 0566	155. 6728	40. 4968
85	7	85. 0573	157. 5261	41. 0367
86	8	86. 0580	159. 3793	41. 5487
87	9	87. 0586	161. 2326	42. 1166
88	1	88. 0593	163. 0858	42. 6566
89	2	89. 0600	164. 9391	43. 1965
90	3	90. 0607	166. 7923	43. 7365
91	4	91. 0613	168. 6456	44. 2765
92	5	92. 0620	170. 4988	44. 8164
93	6	93. 0627	172. 3521	45. 3564
94	7	94. 0633	174. 2053	45. 8654
95	8	95. 0640	176. 0586	46. 4050
96	9	96. 0647	177. 9118	46. 9446
97	1	97. 0654	179. 7651	47. 4842
98	2	98. 0660	181. 6183	48. 0238
99	3	99. 0667	183. 4716	48. 0562
100	4	100. 0674	185. 3248	48. 5634
90	1	90. 9394	166. 6800	48. 5634
91	2	90. 9387	168. 5320	49. 1030
92	3	91. 9380	170. 3840	49. 6426
93	4	92. 9374	172. 3360	50. 1822
94	5	93. 9367	174. 0880	50. 7218
95	6	94. 9360	175. 9400	51. 2614
96	7	95. 9354	177. 7920	51. 8009
97	8	97. 9347	179. 6440	52. 3405
98	9	98. 9340	181. 4960	52. 8801
99	1	98. 9333	183. 3480	53. 4197
100	2	99. 9327	185. 2000	53. 9593

100

## LENGTH—MILLIMETERS TO INCHES

[From 0.00 to 25.40 millimeters by 0.01 millimeter. 1 millimeter = 0.03937 inch.]

## Hundredths of millimeters

Millimeters	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
	Inches									
0.00	0.000000	0.000394	0.000787	0.001181	0.001575	0.001968	0.002362	0.002756	0.003150	0.003543
0.10	.003937	.004311	.004724	.005118	.005512	.005906	.006299	.006693	.007087	.007480
0.20	.007874	.008268	.008661	.009055	.009449	.009842	.010236	.010630	.011024	.011417
0.30	.011811	.012205	.012598	.012992	.013386	.013780	.014173	.014567	.014961	.015354
0.40	.015748	.016142	.016535	.016929	.017323	.017716	.018110	.018504	.018898	.019291
0.50	0.019685	0.020079	0.020472	0.020866	0.021260	0.021654	0.022047	0.022441	0.022835	0.023228
0.60	.023662	.024016	.024409	.024803	.025197	.025590	.025984	.026378	.026772	.027165
0.70	.027559	.027953	.028346	.028740	.029134	.029528	.029921	.030315	.030709	.031102
0.80	.031496	.031890	.032283	.032677	.033071	.033464	.033858	.034252	.034646	.035039
0.90	.035433	.035827	.036220	.036614	.037008	.037402	.037795	.038189	.038583	.038976
1.00	0.03937	0.03976	0.04016	0.04055	0.04094	0.04134	0.04173	0.04213	0.04252	0.04291
1.10	.04331	.04370	.04409	.04449	.04488	.04528	.04567	.04606	.04646	.04685
1.20	.04724	.04764	.04803	.04843	.04882	.04921	.04961	.05000	.05039	.05079
1.30	.05118	.05157	.05197	.05236	.05276	.05315	.05354	.05394	.05433	.05472
1.40	.05512	.05551	.05591	.05630	.05669	.05709	.05748	.05787	.05827	.05866
1.50	0.05906	0.05945	0.05984	0.06024	0.06063	0.06102	0.06142	0.06181	0.06220	0.06260
1.60	.06299	.06339	.06378	.06417	.06457	.06496	.06535	.06575	.06614	.06654
1.70	.06693	.06732	.06772	.06811	.06850	.06890	.06929	.06968	.07008	.07047
1.80	.07087	.07126	.07165	.07205	.07244	.07283	.07323	.07362	.07402	.07441
1.90	.07480	.07520	.07559	.07598	.07638	.07677	.07717	.07756	.07795	.07835
2.00	0.07874	0.07913	0.07953	0.07992	0.08031	0.08071	0.08110	0.08150	0.08189	0.08228
2.10	.08268	.08307	.08346	.08386	.08425	.08465	.08504	.08543	.08583	.08622
2.20	.08661	.08701	.08740	.08780	.08819	.08858	.08898	.08937	.08976	.09016
2.30	.09055	.09094	.09134	.09173	.09213	.09252	.09291	.09331	.09370	.09409
2.40	.09488	.09528	.09567	.09606	.09646	.09685	.09724	.09764	.09803	.09843

<b>2.50</b>	0.09842	0.09961	0.10000	0.10039	0.10079	0.10118	0.10157
2.60	.10236	.10315	.10354	.10394	.10433	.10472	.10512
2.70	.10630	.10669	.10709	.10748	.10787	.10827	.10866
2.80	.11024	.11063	.11102	.11142	.11181	.11220	.11260
2.90	.11417	.11457	.11496	.11535	.11575	.11614	.11654
<b>3.00</b>	0.11811	0.11850	0.11890	0.11929	0.11968	0.12008	0.12047
3.10	.12205	.12244	.12283	.12323	.12362	.12402	.12441
3.20	.12598	.12638	.12677	.12717	.12756	.12795	.12835
3.30	.12992	.13031	.13071	.13110	.13150	.13189	.13228
3.40	.13386	.13425	.13465	.13504	.13543	.13583	.13622
<b>3.50</b>	0.13780	0.13819	0.13858	0.13898	0.13937	0.13976	0.14016
3.60	.14173	.14213	.14252	.14291	.14331	.14370	.14409
3.70	.14567	.14606	.14646	.14685	.14724	.14764	.14803
3.80	.14961	.15000	.15039	.15079	.15118	.15157	.15197
3.90	.15394	.15354	.15433	.15472	.15512	.15551	.15591
<b>4.00</b>	0.15748	0.15787	0.15827	0.15866	0.15905	0.15945	0.15984
4.10	.16181	.16220	.16260	.16299	.16339	.16378	.16417
4.20	.16535	.16575	.16614	.16654	.16693	.16732	.16772
4.30	.16929	.16968	.17008	.17047	.17087	.17126	.17165
4.40	.17323	.17362	.17402	.17441	.17480	.17520	.17559
<b>4.50</b>	0.17716	0.17756	0.17795	0.17835	0.17874	0.17913	0.17953
4.60	.18110	.18150	.18189	.18228	.18268	.18307	.18346
4.70	.18504	.18543	.18583	.18622	.18661	.18701	.18740
4.80	.18898	.18937	.18976	.19016	.19055	.19094	.19134
4.90	.19291	.19331	.19370	.19409	.19449	.19488	.19528
<b>5.00</b>	0.19685	0.19724	0.19764	0.19803	0.19842	0.19882	0.19921
5.10	.20079	.20118	.20157	.20197	.20236	.20276	.20315
5.20	.20472	.20512	.20551	.20591	.20630	.20669	.20709
5.30	.20866	.20905	.20945	.20984	.21024	.21063	.21102
5.40	.21260	.21299	.21339	.21378	.21417	.21457	.21496
<b>5.50</b>	0.21654	0.21693	0.21732	0.21772	0.21811	0.21850	0.21890
5.60	.22047	.22087	.22126	.22165	.22205	.22244	.22283
5.70	.22441	.22480	.22520	.22559	.22598	.22638	.22677
5.80	.22835	.22874	.22913	.22953	.22992	.23031	.23071
5.90	.23228	.23268	.23307	.23346	.23386	.23425	.23465

## LENGTH—MILLIMETERS TO INCHES—Continued

[From 0.00 to 25.40 millimeters by 0.01 millimeter. 1 millimeter = 0.03937 inch.]

## Hundreds of millimeters

Millimeters	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
	Inches									
6.00	0.23661	0.23701	0.23740	0.23779	0.23819	0.23858	0.23898	0.23937	0.23976	0.24371
6.10	.24016	.24055	.24094	.24134	.24173	.24213	.24252	.24291	.24331	.24370
6.20	.24409	.24449	.24488	.24528	.24567	.24606	.24646	.24685	.24724	.24764
6.30	.24803	.24842	.24882	.24921	.24961	.25000	.25039	.25079	.25118	.25157
6.40	.25197	.25236	.25276	.25315	.25354	.25394	.25433	.25472	.25512	.25551
6.50	0.25590	0.25630	0.25669	0.25709	0.25748	0.25787	0.25827	0.25866	0.25905	0.25945
6.60	.25984	.26024	.26063	.26102	.26142	.26181	.26220	.26259	.26339	.26339
6.70	.26378	.26417	.26457	.26496	.26535	.26575	.26614	.26653	.26732	.26732
6.80	.26772	.26811	.26850	.26889	.26929	.26968	.27008	.27047	.27087	.27126
6.90	.27165	.27205	.27244	.27283	.27323	.27362	.27402	.27441	.27480	.27520
7.00	0.27559	0.27598	0.27638	0.27677	0.27716	0.27756	0.27795	0.27835	0.27874	0.27913
7.10	.27953	.27992	.28031	.28071	.28110	.28150	.28189	.28228	.28268	.28307
7.20	.28346	.28386	.28425	.28465	.28504	.28543	.28583	.28622	.28661	.28701
7.30	.28740	.28779	.28819	.28858	.28898	.28937	.28976	.29016	.29055	.29094
7.40	.29134	.29173	.29213	.29252	.29291	.29331	.29370	.29409	.29449	.29488
7.50	0.29538	0.29567	0.29606	0.29646	0.29685	0.29724	0.29764	0.29803	0.29842	0.29882
7.60	.29921	.29961	.30000	.30039	.30079	.30118	.30157	.30197	.30236	.30276
7.70	.30315	.30354	.30394	.30433	.30472	.30512	.30551	.30590	.30630	.30669
7.80	.30709	.30748	.30787	.30827	.30866	.30905	.30945	.30984	.31024	.31063
7.90	.31102	.31142	.31181	.31220	.31260	.31299	.31339	.31378	.31417	.31457
8.00	0.31496	0.31535	0.31575	0.31614	0.31653	0.31693	0.31732	0.31772	0.31811	0.31850
8.10	.31890	.31929	.31968	.32008	.32047	.32087	.32126	.32165	.32205	.32244
8.20	.32283	.32323	.32362	.32402	.32441	.32480	.32520	.32559	.32598	.32638
8.30	.32677	.32716	.32756	.32795	.32835	.32874	.32913	.32953	.32992	.33031
8.40	.33071	.33110	.33149	.33189	.33228	.33268	.33307	.33346	.33385	.33425

8.50	0.33464	0.33504	0.33543	0.33583	0.33622	0.33661	0.33701	0.33740	0.33779	0.33819
8.60	.33858	.33898	.33937	.33976	.34016	.34055	.34094	.34134	.34173	.34213
8.70	.34252	.34291	.34331	.34370	.34409	.34449	.34488	.34527	.34567	.34606
8.80	.34646	.34685	.34724	.34764	.34803	.34842	.34882	.34921	.34961	.35000
8.90	.35039	.35079	.35118	.35157	.35197	.35236	.35276	.35315	.35354	.35394
9.00	0.35433	0.35472	0.35512	0.35551	0.35590	0.35630	0.35669	0.35709	0.35748	0.35787
9.10	.35827	.35866	.35905	.35945	.35984	.36024	.36063	.36102	.36142	.36181
9.20	.36220	.36260	.36299	.36339	.36378	.36417	.36457	.36496	.36535	.36575
9.30	.36614	.36653	.36693	.36732	.36772	.36811	.36850	.36890	.36929	.36968
9.40	.37008	.37047	.37087	.37126	.37165	.37205	.37244	.37283	.37323	.37362
9.50	0.37441	0.37480	0.37520	0.37559	0.37598	0.37638	0.37677	0.37716	0.37756	0.37795
9.60	.37795	.37835	.37874	.37913	.37953	.37992	.38031	.38071	.38110	.38150
9.70	.38189	.38228	.38268	.38307	.38346	.38386	.38425	.38464	.38504	.38543
9.80	.38583	.38622	.38661	.38701	.38740	.38779	.38819	.38858	.38898	.38937
9.90	.38976	.39016	.39055	.39094	.39134	.39173	.39213	.39252	.39291	.39331
10.00	0.39370	0.39409	0.39449	0.39488	0.39527	0.39567	0.39606	0.39646	0.39685	0.39724
10.10	.39764	.39803	.39842	.39882	.39921	.39961	.40000	.40039	.40079	.40118
10.20	.40157	.40197	.40236	.40276	.40315	.40354	.40394	.40433	.40472	.40512
10.30	.40551	.40590	.40630	.40669	.40709	.40748	.40787	.40827	.40866	.40905
10.40	.40945	.40984	.41024	.41063	.41102	.41142	.41181	.41220	.41260	.41299
10.50	0.41338	0.41378	0.41417	0.41457	0.41496	0.41535	0.41575	0.41614	0.41653	0.41693
10.60	.41732	.41772	.41811	.41850	.41890	.41929	.41968	.42008	.42047	.42087
10.70	.42126	.42165	.42205	.42244	.42283	.42323	.42362	.42401	.42441	.42480
10.80	.42520	.42559	.42598	.42638	.42677	.42716	.42756	.42795	.42835	.42874
10.90	.42913	.42953	.42992	.43031	.43071	.43110	.43150	.43189	.43228	.43268
11.00	0.43307	0.43346	0.43386	0.43425	0.43464	0.43504	0.43543	0.43583	0.43622	0.43661
11.10	.43701	.43740	.43779	.43819	.43858	.43898	.43937	.43976	.44016	.44055
11.20	.44094	.44134	.44173	.44213	.44252	.44291	.44331	.44370	.44409	.44449
11.30	.44488	.44527	.44567	.44606	.44646	.44685	.44724	.44764	.44803	.44842
11.40	.44882	.44921	.44961	.45000	.45039	.45079	.45118	.45157	.45197	.45236
11.50	0.45276	0.45315	0.45354	0.45394	0.45433	0.45472	0.45512	0.45551	0.45590	0.45630
11.60	.45669	.45709	.45748	.45787	.45827	.45866	.45905	.45945	.45984	.46024
11.70	.46063	.46102	.46142	.46181	.46220	.46259	.46299	.46338	.46378	.46417
11.80	.46457	.46496	.46535	.46574	.46614	.46653	.46693	.46732	.46772	.46811
11.90	.46850	.46890	.46929	.46968	.47008	.47047	.47087	.47126	.47165	.47205

## LENGTH—MILLIMETERS TO INCHES—Continued.

[From 0.00 to 25.40 millimeters by 0.01 millimeter. 1 millimeter = 0.03937 inch.]

Millimeters	Hundredths of millimeters						
	0.00	0.01	0.02	0.03	0.04	0.05	0.06
12.00	Inches 0.47244	Inches 0.47283	Inches 0.47323	Inches 0.47362	Inches 0.47401	Inches 0.47441	Inches 0.47480
12.10	.47638	.47716	.47756	.47795	.47835	.47874	.47913
12.20	.48031	.48071	.48110	.48149	.48189	.48228	.48268
12.30	.48425	.48464	.48504	.48543	.48583	.48622	.48661
12.40	.48819	.48858	.48898	.48937	.48976	.49016	.49055
12.50	0.49212	0.49252	0.49291	0.49331	0.49370	0.49409	0.49449
12.60	.49606	.49646	.49685	.49724	.49764	.49803	.49842
12.70	.50000	.50039	.50079	.50118	.50157	.50197	.50236
12.80	.50394	.50433	.50472	.50512	.50551	.50590	.50630
12.90	.50787	.50827	.50866	.50905	.50945	.50984	.51024
13.00	0.51181	0.51220	0.51260	0.51299	0.51338	0.51378	0.51417
13.10	.51575	.51614	.51653	.51693	.51732	.51772	.51811
13.20	.51968	.52008	.52047	.52087	.52126	.52165	.52205
13.30	.52362	.52401	.52441	.52480	.52520	.52559	.52598
13.40	.52756	.52795	.52835	.52874	.52913	.52953	.52992
13.50	0.53150	0.53189	0.53228	0.53268	0.53307	0.53346	0.53386
13.60	.53543	.53583	.53622	.53661	.53701	.53740	.53779
13.70	.53937	.53976	.54016	.54055	.54094	.54134	.54173
13.80	.54331	.54370	.54409	.54449	.54488	.54527	.54567
13.90	.54724	.54764	.54803	.54842	.54882	.54921	.54961
14.00	0.55118	0.55157	0.55197	0.55236	0.55275	0.55315	0.55354
14.10	.55512	.55551	.55590	.55630	.55669	.55709	.55748
14.20	.55905	.55945	.55984	.56024	.56063	.56102	.56142
14.30	.56299	.56338	.56378	.56417	.56457	.56496	.56535
14.40	.56693	.56732	.56772	.56811	.56850	.56890	.56929

14.50	0.57086	0.57126	0.57165	0.57205	0.57244	0.57283	0.57323	0.57362	0.57401
14.60	.57480	.57520	.57559	.57598	.57638	.57677	.57716	.57756	.57795
14.70	.57874	.57913	.57953	.57992	.58031	.58071	.58110	.58149	.58189
14.80	.58268	.58307	.58346	.58386	.58425	.58464	.58504	.58543	.58583
14.90	.58661	.58701	.58740	.58779	.58819	.58858	.58898	.58937	.58976
15.00	0.59055	0.59094	0.59134	0.59173	0.59212	0.59252	0.59291	0.59331	0.59370
15.10	.59449	.59488	.59527	.59567	.59606	.59646	.59685	.59724	.59764
15.20	.59842	.59882	.59921	.59961	.60000	.60039	.60079	.60118	.60157
15.30	.60236	.60275	.60315	.60354	.60394	.60433	.60472	.60512	.60551
15.40	.60630	.60669	.60709	.60748	.60787	.60827	.60866	.60905	.60945
15.50	0.61024	0.61063	0.61102	0.61142	0.61181	0.61220	0.61260	0.61299	0.61338
15.60	.61417	.61457	.61496	.61535	.61575	.61614	.61653	.61693	.61732
15.70	.61811	.61850	.61890	.61929	.61968	.62008	.62047	.62086	.62126
15.80	.62205	.62244	.62283	.62323	.62362	.62401	.62441	.62480	.62520
15.90	.62598	.62638	.62677	.62716	.62756	.62795	.62835	.62874	.62913
16.00	0.62992	0.63031	0.63071	0.63110	0.63149	0.63189	0.63228	0.63268	0.63307
16.10	.63386	.63425	.63464	.63504	.63543	.63583	.63622	.63661	.63701
16.20	.63770	.63819	.63858	.63898	.63937	.63976	.64016	.64055	.64094
16.30	.64173	.64212	.64252	.64291	.64331	.64370	.64409	.64449	.64488
16.40	.64567	.64606	.64646	.64685	.64724	.64764	.64803	.64842	.64882
16.50	0.64960	0.65000	0.65039	0.65079	0.65118	0.65157	0.65197	0.65236	0.65275
16.60	.65354	.65394	.65433	.65472	.65512	.65551	.65590	.65630	.65669
16.70	.65748	.65787	.65827	.65866	.65905	.65945	.65984	.66023	.66102
16.80	.66142	.66181	.66220	.66260	.66299	.66338	.66378	.66417	.66457
16.90	.66535	.66575	.66614	.66653	.66693	.66732	.66772	.66811	.66850
17.00	0.66929	0.66968	0.67008	0.67047	0.67086	0.67126	0.67165	0.67205	0.67244
17.10	.67323	.67362	.67401	.67441	.67480	.67520	.67559	.67598	.67638
17.20	.67716	.67756	.67795	.67835	.67874	.67913	.67953	.67992	.68031
17.30	.68110	.68149	.68189	.68228	.68268	.68307	.68346	.68386	.68425
17.40	.68504	.68543	.68583	.68622	.68661	.68701	.68740	.68779	.68819
17.50	0.68898	0.68937	0.68976	0.69016	0.69055	0.69094	0.69134	0.69173	0.69212
17.60	.69291	.69331	.69370	.69409	.69449	.69488	.69527	.69567	.69606
17.70	.69685	.69724	.69764	.69803	.69842	.69882	.69921	.69960	.70000
17.80	.70079	.70118	.70157	.70197	.70236	.70275	.70315	.70354	.70394
17.90	.70472	.70512	.70551	.70590	.70630	.70669	.70709	.70748	.70787

## LENGTH—MILLIMETERS TO INCHES—Continued

[From 0.00 to 25.40 millimeters by 0.01 millimeter. 1 millimeter = 0.03937 inch.]

Millimeters	Hundreds of millimeters						
	0.00	0.01	0.02	0.03	0.04	0.05	0.06
18.00	Inches 0.70866	Inches 0.70905	Inches 0.70945	Inches 0.70984	Inches 0.71023	Inches 0.71063	Inches 0.71102
18.10	.71260	.71299	.71338	.71378	.71417	.71457	.71496
18.20	.71653	.71693	.71732	.71772	.71811	.71850	.71890
18.30	.72047	.72086	.72126	.72165	.72205	.72244	.72283
18.40	.72441	.72480	.72520	.72559	.72598	.72638	.72677
18.50	0.72834	0.72874	0.72913	0.72953	0.72992	0.73031	0.73071
18.60	.73228	.73268	.73307	.73346	.73386	.73425	.73464
18.70	.73622	.73661	.73701	.73740	.73779	.73819	.73858
18.80	.74016	.74055	.74094	.74134	.74173	.74212	.74252
18.90	.74409	.74449	.74488	.74527	.74567	.74606	.74646
19.00	0.74803	0.74842	0.74882	0.74921	0.74960	0.75000	0.75039
19.10	.75197	.75236	.75275	.75315	.75354	.75394	.75433
19.20	.75590	.75630	.75669	.75709	.75748	.75787	.75827
19.30	.75984	.76023	.76063	.76102	.76142	.76181	.76220
19.40	.76378	.76417	.76457	.76496	.76535	.76575	.76614
19.50	0.76772	0.76811	0.76850	0.76889	0.76929	0.76968	0.77008
19.60	.77165	.77205	.77244	.77283	.77323	.77362	.77401
19.70	.77559	.77598	.77638	.77677	.77716	.77756	.77795
19.80	.77953	.77992	.78031	.78071	.78110	.78149	.78189
19.90	.78346	.78386	.78425	.78464	.78504	.78543	.78583
20.00	0.78740	0.78819	0.78858	0.78897	0.78937	0.78976	0.79016
20.10	.79134	.79173	.79212	.79252	.79291	.79331	.79370
20.20	.79527	.79567	.79606	.79646	.79685	.79724	.79764
20.30	.79921	.79960	.80000	.80039	.80079	.80118	.80157
20.40	.80315	.80354	.80394	.80433	.80472	.80512	.80551

20.50	0.80708	0.80787	0.80866	0.80945	0.80984	0.81023
20.60	.81102	.81142	.81220	.81299	.81338	.81457
20.70	.81496	.81535	.81575	.81614	.81653	.81850
20.80	.81890	.81929	.81968	.82008	.82047	.82244
20.90	.82283	.82323	.82362	.82401	.82441	.82638
<b>21.00</b>	<b>0.82677</b>	<b>0.82716</b>	<b>0.82756</b>	<b>0.82795</b>	<b>0.82834</b>	<b>0.82874</b>
21.10	.83071	.83110	.83149	.83189	.83228	.83268
21.20	.83464	.83504	.83543	.83583	.83622	.83661
21.30	.83858	.83897	.83937	.83976	.84016	.84055
21.40	.84252	.84291	.84331	.84370	.84409	.84449
<b>21.50</b>	<b>0.84646</b>	<b>0.84685</b>	<b>0.84724</b>	<b>0.84764</b>	<b>0.84803</b>	<b>0.84842</b>
21.60	.85039	.85079	.85118	.85157	.85197	.85236
21.70	.85433	.85472	.85512	.85551	.85590	.85630
21.80	.85827	.85866	.85905	.85945	.85984	.86023
21.90	.86220	.86260	.86299	.86338	.86378	.86417
<b>22.00</b>	<b>0.86614</b>	<b>0.86653</b>	<b>0.86693</b>	<b>0.86732</b>	<b>0.86771</b>	<b>0.86811</b>
22.10	.87008	.87047	.87086	.87126	.87165	.87205
22.20	.87401	.87441	.87480	.87520	.87550	.87598
22.30	.87795	.87834	.87874	.87913	.87953	.87992
22.40	.88189	.88228	.88268	.88307	.88346	.88386
<b>22.50</b>	<b>0.88582</b>	<b>0.88622</b>	<b>0.88661</b>	<b>0.88701</b>	<b>0.88740</b>	<b>0.88779</b>
22.60	.88976	.89016	.89055	.89094	.89134	.89173
22.70	.89370	.89409	.89449	.89488	.89527	.89567
22.80	.89764	.89803	.89842	.89882	.89921	.89960
22.90	.90157	.90197	.90236	.90275	.90315	.90354
<b>23.00</b>	<b>0.90551</b>	<b>0.90590</b>	<b>0.90630</b>	<b>0.90669</b>	<b>0.90708</b>	<b>0.90748</b>
23.10	.90945	.90984	.91023	.91063	.91102	.91142
23.20	.91338	.91378	.91417	.91457	.91496	.91535
23.30	.91732	.91771	.91811	.91850	.91890	.91929
23.40	.92126	.92165	.92205	.92244	.92283	.92323
<b>23.50</b>	<b>0.92520</b>	<b>0.92559</b>	<b>0.92598</b>	<b>0.92638</b>	<b>0.92677</b>	<b>0.92716</b>
23.60	.92913	.92953	.92992	.93031	.93071	.93110
23.70	.93307	.93346	.93386	.93425	.93464	.93504
23.80	.93701	.93740	.93779	.93819	.93858	.93897
23.90	.94094	.94134	.94173	.94212	.94252	.94291

LENGTH—MILLIMETERS TO INCHES—Continued

[From 0.00 to 25.40 millimeters by 0.01 millimeter 1 millimeter = 0.03937 inch.]

Hundredths of millimeters

Hundredths of millimeters						
Millimeters	0.00	0.01	0.02	0.03	0.04	0.05
	Inches	Inches	Inches	Inches	Inches	Inches
24.00	0.94488	0.94527	0.94567	0.94606	0.94645	0.94685
24.10	.94882	.94921	.94960	.95039	.95079	.95118
24.20	.95275	.95315	.95354	.95394	.95433	.95472
24.30	.95669	.95708	.95748	.95787	.95827	.95866
24.40	.96063	.96102	.96142	.96181	.96220	.96259
24.50	0.96456	0.96496	0.96535	0.96575	0.96614	0.96653
24.60	0.96850	0.96890	0.96929	0.96968	0.97008	0.97047
24.70	.97244	.97283	.97323	.97362	.97401	.97441
24.80	.97638	.97677	.97716	.97756	.97795	.97834
24.90	.98031	.98071	.98110	.98149	.98189	.98228
25.00	0.98425	0.98464	0.98504	0.98543	0.98582	0.98622
25.10	.98819	.98858	.98897	.98937	.98976	.99016
25.20	.99212	.99252	.99291	.99331	.99370	.99409
25.30	.99606	.99645	.99685	.99724	.99764	.99803
25.40	1.00000					

---

---

---

**IX. TABLES OF EQUIVALENTS FROM 1 TO 999 UNITS**

---

---

# LENGTH—FEET TO METERS

[Reduction factor: 1 foot = 0.3048006096 meter]

Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	
0	0	30.48006	200	60.96012	300	91.44018	400	121.92024	500	152.40030	600	182.88037	700	213.36043
1	0.30480	1	61.26942	1	91.4498	1	122.2504	1	152.70511	1	183.18317	1	213.66523	
2	.60960	2	31.08966	2	60.56972	2	92.04978	2	122.5985	2	153.00991	2	183.48997	
3	.91440	3	31.39446	3	61.87452	3	92.35458	3	122.84465	3	153.31471	3	183.79497	
4	1.21920	4	31.69926	4	62.17932	4	92.65939	4	123.13945	4	153.61951	4	184.09957	
5	1.52400	5	32.00406	5	62.48412	5	92.96119	5	123.44425	5	153.92481	5	184.40437	
6	1.82880	6	32.30886	6	62.78893	6	93.26899	6	123.79005	6	154.22911	6	184.70917	
7	2.13360	7	32.61367	7	63.09373	7	93.63853	7	124.03858	7	154.53391	7	185.01397	
8	2.43840	8	32.91847	8	63.87559	8	94.18339	9	124.38865	8	154.83871	8	185.31877	
9	2.74321	9	33.22227	9	63.70333	9	94.18339	9	124.66345	9	155.14351	9	185.62357	
10	3.04801	10	33.52807	210	64.00813	310	94.48819	410	124.98825	510	155.44881	610	185.28287	
11	3.35281	11	33.83887	240	64.31293	340	94.79399	1	125.27303	1	155.75311	1	186.23317	
12	3.65761	12	34.13767	2	64.61773	2	95.09779	2	125.57785	2	156.05779	2	186.53797	
13	3.96241	13	34.42447	3	64.92523	3	95.40259	3	125.86367	3	156.36751	3	186.8277	
14	4.26721	14	34.74727	4	65.22733	4	95.70739	4	126.18745	4	156.66751	4	187.1457	
15	4.57201	15	35.05207	5	65.52123	5	96.01219	5	126.49225	5	156.97231	5	187.45237	
16	4.87681	16	35.35687	6	65.82693	6	96.31699	6	126.79705	6	157.27711	6	187.75718	
17	5.18161	17	35.66167	7	66.14173	7	96.62179	7	127.10185	7	157.58192	7	188.06198	
18	5.48641	18	35.96647	8	66.44653	8	96.92659	8	127.40665	8	157.88672	8	188.36678	
19	5.79121	19	36.27127	9	66.75133	9	97.23139	9	127.71146	9	158.19152	9	188.67158	
20	6.09601	20	36.57607	220	67.05613	320	97.53620	420	128.01626	520	158.49632	620	188.97638	
21	6.40981	21	36.88087	1	67.36093	1	97.84100	1	128.31206	1	158.80112	1	189.28112	
22	6.70561	22	37.18567	2	67.66574	2	98.14380	2	128.62586	2	159.10592	2	189.58958	
23	7.01041	23	37.49047	3	67.97054	3	98.45606	3	128.93066	3	159.41072	3	189.89078	
24	7.31521	24	37.79228	4	68.27534	4	98.75540	4	129.23546	4	159.71552	4	190.19558	
25	7.62001	25	38.10088	5	68.58014	5	99.06020	5	129.50426	5	160.02032	5	190.50038	
26	7.92482	26	38.40886	6	68.88494	6	99.36305	6	129.85056	6	160.32512	6	190.80518	
27	8.22962	27	38.70968	7	69.18974	7	99.66880	7	130.1986	7	160.62292	7	191.0998	
28	8.53442	28	39.01448	8	69.49454	8	99.97460	8	130.44646	8	161.93472	8	191.44748	
29	8.83922	29	39.31928	9	69.79934	9	100.27940	9	130.75946	9	161.23952	9	191.7958	
30	9.14402	30	39.62408	230	70.10414	330	100.58420	430	131.06426	530	161.54432	630	192.02438	
31	9.44882	31	39.88888	1	70.40890	1	100.88900	1	131.56027	1	161.84912	1	192.28198	
32	9.75362	32	40.23368	2	70.71374	2	101.19380	2	131.67386	2	162.15392	2	192.63399	
33	10.05842	33	40.53848	3	71.01854	3	101.96860	3	131.97866	3	162.45872	3	193.38797	
34	10.36322	34	40.84328	4	71.32334	4	101.80340	4	132.28346	4	162.76353	4	193.44359	
35	10.66802	35	41.14808	5	71.62814	5	102.10320	5	132.58827	5	163.06833	5	193.54839	
36	10.97282	36	41.45288	6	71.93294	6	102.41300	6	132.88307	6	163.37313	6	194.33325	
37	11.27762	37	41.75768	7	72.23774	7	102.71781	7	133.17087	7	163.67733	7	194.15799	
38	11.58242	38	42.06248	8	72.54255	8	103.02261	8	133.50267	8	163.98723	8	194.46279	
39	11.88722	39	42.36728	9	72.84735	9	103.32741	9	133.80747	9	164.28753	9	194.76759	
40	12.19202	40	42.67209	240	73.15215	340	103.63221	440	134.11227	540	164.59233	640	195.07239	
41	12.49682	41	42.97689	1	73.45695	1	103.93701	1	134.41707	1	164.89713	1	195.37719	
42	12.80163	42	43.28169	2	73.76175	2	104.24181	2	134.72187	2	165.81915	2	195.68199	
43	13.10643	43	43.58655	3	104.54666	3	104.54666	3	135.06667	3	165.50673	3	195.98677	
44	13.41123	44	43.89129	4	74.37135	4	104.85141	4	135.33147	4	166.81513	4	196.29159	
45	13.71603	45	44.19609	5	74.67615	5	105.15621	5	135.65627	5	167.11633	5	196.5639	
46	14.02083	46	44.50089	6	74.98095	6	105.16101	6	135.94107	6	166.90119	6	197.30125	
47	14.32563	47	44.80569	7	75.28575	7	106.76881	7	136.24587	7	167.72939	7	197.70599	
48	14.63043	48	45.11049	8	75.59055	8	106.07061	8	136.55027	8	167.03073	8	198.50180	
49	14.93523	49	45.41529	9	75.88535	9	106.37541	9	136.85567	9	167.33553	9	197.81560	

50	15.24003	15.54483	250	45.72009	160	18.28804	160	48.46330	9	17.98324	9	48.46330	9	78.94336	9	109.43232	9	139.90348	9	170.38334	9	200.86360	9	231.34366	9	261.82372	9	292.30378	
50	15.84963	2	46.32669	2	76.80975	2	76.91145	3	16.14493	3	107.59462	3	108.07468	2	137.69881	2	137.69881	2	168.53474	3	168.85934	4	195.03848	3	229.51484	3	259.99492	4	290.47498
50	16.15443	3	46.63449	3	77.41935	4	107.89422	4	108.20442	5	77.72416	5	108.50902	6	108.52896	5	138.68428	5	138.68428	6	169.16344	5	199.64460	6	230.12446	5	260.60452	6	291.08458
50	16.56043	5	47.24409	5	77.73737	6	108.52896	6	108.52902	6	108.52902	6	138.98908	6	138.98908	6	169.46914	6	169.46914	7	199.94920	6	230.42926	6	260.90932	6	291.38932		
50	17.06883	6	47.54890	6	78.02896	7	109.81382	7	109.81382	8	78.02896	8	109.11862	8	139.59868	8	139.59868	8	170.07874	8	200.55880	8	231.03886	8	261.51898	8	291.99898		
50	17.37363	7	47.83570	8	48.15850	8	78.63858	8	78.63858	9	109.11862	9	139.59868	9	170.07874	9	200.55880	9	231.03886	9	261.51898	9	291.99898	9	291.99898				
50	17.67844	8	48.46330	9	17.98324	9	48.46330	9	78.94336	9	109.43232	9	139.90348	9	170.38334	9	200.86360	9	231.34366	9	261.82372	9	292.30378	9	291.99898				
50	18.28804	10	48.76810	10	49.07290	11	79.52816	11	80.02790	11	110.03302	11	140.51308	11	170.98334	11	201.47320	11	201.77800	11	232.52806	11	262.43329	11	292.91339				
50	18.59284	11	49.37764	12	79.85776	12	110.33782	12	140.81788	12	141.62626	12	171.60226	12	171.60226	12	171.60226	12	202.08280	12	232.52806	12	262.78183	12	293.21819				
50	19.04444	13	49.68250	13	80.16256	14	110.46736	14	110.94742	14	141.27478	14	171.70754	14	202.38760	14	232.86767	14	262.86767	14	293.52779	14	293.82779						
50	19.57242	14	49.98734	14	50.29210	15	80.77216	15	80.77216	15	111.52222	15	141.73228	15	172.21234	15	202.69241	15	233.17247	15	263.65253	15	294.13259						
50	19.81204	15	50.29210	15	50.59690	16	81.07696	16	81.07696	16	111.55702	16	140.33708	16	172.51715	16	202.99721	16	233.47727	16	263.95733	16	294.43739						
50	20.1684	16	50.59690	16	50.80170	17	81.38176	17	81.38176	17	111.86182	17	142.34188	17	172.81935	17	203.30271	17	233.78207	17	264.26213	17	294.74219						
50	20.42164	17	50.80170	17	51.20650	18	81.68836	18	81.68836	18	112.16662	18	143.12675	18	173.81675	18	203.12681	18	234.56693	18	264.56693	18	295.35179						
50	21.03124	19	51.51130	19	81.99136	19	81.99136	19	112.47142	19	142.95149	19	173.43155	19	203.91161	19	234.89167	19	264.89167	19	295.35179	19	295.35179						
70	21.33604	170	51.81610	270	82.29616	370	112.77623	470	143.25629	570	173.73635	670	204.21661	770	234.66447	770	265.17653	770	295.65659	770	295.65659	770	295.65659						
70	21.6084	1	52.12990	1	82.60097	1	113.08103	1	143.56109	1	174.04115	1	204.52121	1	235.00127	1	265.48133	1	295.96139	1	295.96139	1	295.96139						
70	21.94564	2	52.42570	2	82.90557	2	113.86063	2	143.86063	2	174.34595	2	204.52601	2	235.30607	2	266.26611	2	296.26611	2	296.26611	2	296.26611						
70	22.25044	3	52.73051	3	83.21057	3	113.69053	3	144.17069	3	174.63071	3	205.13081	3	235.13081	3	266.57099	3	296.09093	3	296.09093	3	296.09093						
70	22.55225	4	53.03513	4	83.51537	5	113.99543	4	144.47549	4	174.95555	4	205.13081	4	235.13081	4	266.87579	4	296.87579	4	296.87579	4	296.87579						
70	22.86005	5	53.34011	5	83.82017	5	114.30217	5	144.78029	5	175.26035	5	205.74041	5	236.22047	5	266.70053	5	297.48539	5	297.48539	5	297.48539						
70	23.16485	6	53.64491	6	84.12497	6	114.60503	6	145.08509	6	175.56515	6	206.45521	6	236.52527	6	267.00533	6	297.48539	6	297.48539	6	297.48539						
70	23.46965	7	53.94965	7	84.24977	7	115.90963	7	145.38989	7	175.80995	7	206.35500	7	236.33007	7	267.31013	7	297.7920	7	297.7920	7	297.7920						
70	23.77445	8	54.25451	8	84.73457	8	115.21463	8	145.69498	8	176.17475	8	206.65481	8	237.13487	8	267.61494	8	298.09500	8	298.39980	8	298.39980						
80	24.38405	180	54.86411	280	85.34417	380	115.82423	480	146.30429	580	176.78435	680	204.26441	780	237.74448	780	268.22454	780	298.70460	780	298.70460	780	298.70460						
80	24.68841	1	55.16891	1	85.64897	1	116.12923	1	146.60909	1	177.08915	1	207.56922	1	238.04928	1	268.59344	1	299.00940	1	299.00940	1	299.00940						
80	24.99656	2	55.47371	2	85.93577	2	116.43833	2	146.91389	2	177.36935	2	207.57402	2	238.35408	2	268.83414	2	299.31420	2	299.31420	2	299.31420						
80	25.29345	3	55.77851	3	86.25857	3	116.73863	3	147.52350	3	177.69876	3	208.17882	3	238.63888	3	269.16190	3	299.42380	3	299.42380	3	299.42380						
80	25.60325	4	56.08331	4	86.56337	4	117.04343	4	147.83433	4	178.03356	4	208.48362	4	238.96362	4	269.44374	4	299.42380	4	299.42380	4	299.42380						
80	25.98085	5	56.38811	5	86.86817	5	117.38233	5	148.30280	5	178.30836	5	208.78842	5	239.26848	5	269.7854	5	300.22860	5	300.53340	5	300.53340						
80	26.32185	6	56.69291	6	87.17297	6	117.65304	6	148.13310	6	178.63116	6	209.93322	6	239.57328	6	270.05334	6	300.53340	6	300.53340	6	300.53340						
80	26.51765	7	56.99771	7	87.47777	7	117.95784	7	148.43790	7	178.91796	7	209.39802	7	239.87808	7	270.33814	7	300.83820	7	300.83820	7	300.83820						
80	26.82245	8	57.30251	8	87.80258	9	118.20824	9	148.74750	9	179.52756	9	210.00762	9	240.48768	9	270.66294	9	301.44780	9	301.44780	9	301.44780						
90	27.43205	190	57.91212	290	88.39218	390	118.87224	490	149.35230	590	179.83236	690	210.31242	790	240.79248	790	271.27524	790	301.30155	790	301.30155	790	301.30155						
90	27.73686	1	58.21692	1	88.69698	1	119.17074	1	149.65710	1	180.13716	1	210.31722	1	241.09728	1	271.57734	1	302.05740	1	302.05740	1	302.05740						
90	28.04166	2	58.52172	2	89.00178	2	119.48184	2	149.96190	2	180.44106	2	210.32020	2	241.40208	2	271.88214	2	302.36220	2	302.36220	2	302.36220						
90	28.34464	3	58.82652	3	89.30058	3	119.76664	3	150.26670	3	180.74676	3	210.22682	3	241.70688	3	272.18694	3	302.66701	3	302.66701	3	302.66701						
90	28.65126	4	59.13132	4	89.61138	4	120.09144	4	150.57150	4	181.05156	4	211.53162	4	242.01168	4	272.49174	4	302.97132	4	302.97132	4	302.97132						
90	28.95006	5	59.43612	5	89.91618	5	120.39624	5	150.87630	5	181.35636	5	211.83642	5	242.31645	5	272.79655	5	303.22661	5	303.22661	5	303.22661						
90	29.26086	6	59.74092	6	90.22098	6	120.70104	6	151.18110	6	181.66116	6	212.14122	6	242.62120	6	273.10135	6	303.58141	6	303.58141	6	303.58141						
90	29.56566	7	60.04572	7	90.52578	7	121.05584	7	151.48590	7	181.95856	7	212.44602	7	242.92609	7	273.46165	7	304.19101	7	304.19101	7	304.19101						
90	29.87046	8	60.33052	8	90.83058	8	121.31064	8	151.73084	8	182.27076	8	212.50853	8	243.30897	8	273.71095	8	304.19101	8	304.19101	8	304.19101						
90	30.17272	9	60.63532	9	91.13538	9	121.61544	9	152.09550	9	182.57557	9	213.05563	9	243.53569	9	274.15075	9	304.49581	9	304.49581	9	304.49581						

1 inch = 0.02540 meter  
 2 inches = .05080 meter  
 3 inches = .07620 meter

7 inches = 0.10160 meter  
 8 inches = .12700 meter  
 9 inches = .15240 meter

10 inches = 0.17780 meter  
 11 inches = .20320 meter  
 12 inches = .22860 meter

# LENGTH—METERS TO FEET

[Reduction factor: 1 meter = 3.2808333333 feet]

Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	
0	328.0333	200	656.16667	300	984.25000	400	1,312.33333	500	1,640.41667	600	1,968.50000	700	2,296.58333	800	2,624.66667	
1	328.0833	331.36417	659.44750	401	987.53033	501	1,315.61417	601	1,643.69730	701	1,971.78083	801	2,299.86417	900	2,627.94730	
2	656.1667	662.72833	990.81167	402	988.79833	502	1,316.94250	602	1,644.80250	702	1,973.66167	802	2,303.14500	902	2,631.22833	
3	984.25000	986.00917	3,332.17583	403	991.02500	503	1,322.17583	603	1,650.25917	703	1,978.34250	803	2,306.42583	903	2,634.50917	
4	1,312.33333	1,341.20667	669.29000	404	997.37333	504	1,342.45667	604	1,653.50000	704	1,984.62333	804	2,309.70667	904	2,637.79000	
5	1,640.41667	1,672.57083	5,000.65417	405	1,000.65417	505	1,348.73750	605	1,656.82083	705	1,984.90417	805	2,312.98750	905	2,641.07083	
6	198.50000	675.85167	6,1003.95200	406	1,332.01833	506	1,660.10167	606	1,988.18500	706	2,000.24500	806	2,316.68333	906	2,645.35167	
7	351.76833	769.21325	7,697.17253	407	1,007.21325	507	1,663.38250	607	1,991.46583	707	2,007.47500	807	2,317.64730	907	2,647.63250	
8	22.96583	354.09117	8,100.49667	408	1,010.49667	508	1,338.58000	608	1,666.66333	708	1,994.78667	808	2,322.83000	908	2,650.91333	
9	29.52750	357.61083	9,685.69417	409	1,013.77250	509	1,341.86083	609	1,669.94417	709	1,998.02750	809	2,326.11083	909	2,654.19417	
10	32.80933	360.89167	210	688.97500	310	1,017.05833	410	1,345.14167	510	1,673.22500	610	2,001.30833	710	2,329.39167	810	2,657.47500
11	32.80917	364.17250	1	692.25383	2	1,023.63000	3	1,348.42250	4	1,676.50588	5	2,001.38917	6	2,332.87800	7	2,658.58333
12	39.37000	456.43333	2	655.53637	3	1,026.90033	4	1,351.07033	5	1,683.06750	6	2,007.87000	7	2,335.95333	8	2,664.03667
13	45.6083	370.73417	3	698.06750	4	1,030.18167	5	1,358.26310	6	1,686.34833	7	2,014.13167	8	2,339.23417	9	2,667.31750
14	45.93167	374.01500	4	702.09833	5	1,030.18167	6	1,358.26310	7	1,686.34833	8	2,014.13167	9	2,342.51500	1	2,664.48083
15	49.21250	377.29583	5	705.37917	6	1,033.46250	7	1,361.54583	8	1,689.62917	9	2,017.71250	1	2,345.79883	2	2,670.87683
16	52.49333	380.57667	6	708.66000	7	1,036.74333	8	1,364.82667	9	1,692.91000	10	2,020.99333	11	2,349.07667	12	2,673.89197
17	55.77417	383.83750	7	714.94083	8	1,040.02417	9	1,368.07050	10	1,696.19083	11	2,024.27417	12	2,352.35750	13	2,677.16000
18	58.05500	387.13833	8	715.22167	9	1,043.30500	10	1,371.38833	11	1,699.47167	12	2,028.54167	13	2,358.63833	14	2,682.7167
19	62.33583	390.41917	9	718.50250	10	1,046.58583	11	1,374.66917	12	1,699.47167	13	2,030.85583	14	2,358.63833	15	2,687.00583
20	65.61667	412.0	220	721.78333	320	1,049.86667	420	1,377.95000	520	1,706.03333	620	2,034.11667	720	2,362.20000	820	2,690.28333
21	68.89750	396.98083	1	725.06417	2	1,053.14750	3	1,381.23083	4	1,709.31417	5	2,037.39750	6	2,365.48083	7	2,693.56417
22	72.17833	400.26167	2	728.34500	3	1,056.48383	4	1,384.51167	5	1,712.59500	6	2,040.67833	7	2,368.61567	8	2,694.81283
23	75.45917	403.54250	3	731.62583	4	1,059.70917	5	1,387.79250	6	1,715.87583	7	2,043.95917	8	2,372.04250	9	2,698.22097
24	78.74000	406.82333	4	734.90667	5	1,062.99000	6	1,391.07333	7	1,719.15667	8	2,047.24000	9	2,375.32333	10	2,703.40667
25	82.02083	541.10417	5	738.18750	6	1,066.27083	7	1,722.43250	8	1,728.50083	9	2,054.80167	10	2,378.60417	11	2,706.68750
26	85.30167	413.38500	6	741.46833	7	1,069.53167	8	1,737.63500	9	1,725.71933	10	2,054.80167	11	2,381.88500	12	2,709.68633
27	88.58250	416.66583	7	744.74917	8	1,072.82350	9	1,740.91583	10	1,728.99917	11	2,058.02600	12	2,386.16583	13	2,713.24917
28	91.86333	419.94667	8	748.00000	9	1,076.11333	10	1,744.19697	11	1,732.28000	12	2,060.36333	13	2,388.44667	14	2,716.52300
29	95.14417	423.22750	9	751.31083	10	1,079.39417	11	1,407.47750	12	1,735.56083	13	2,063.64417	14	2,391.72750	15	2,719.81083
30	98.42500	130	230	754.50167	330	1,082.67500	430	1,410.75833	530	1,738.84167	630	2,066.32500	730	2,395.00833	830	2,723.09167
31	101.70783	429.87917	1	761.15333	2	1,089.23667	3	1,417.32000	4	1,742.12250	5	2,073.48667	6	2,398.28917	7	2,729.65333
32	104.98667	433.07000	2	764.43417	3	1,092.51750	4	1,420.78750	5	1,748.68417	6	2,074.67500	7	2,404.85083	8	2,732.93417
33	107.26750	436.35083	3	767.61367	4	1,071.75100	5	1,423.88167	6	1,751.95600	7	2,080.13167	8	2,408.13167	9	2,736.21500
34	111.54333	443.61677	4	767.71500	5	1,099.95983	6	1,427.16250	7	1,755.24583	8	2,083.32917	9	2,411.41250	10	2,739.49583
35	114.82917	446.91290	5	770.44667	6	1,102.36000	7	1,430.44333	8	1,758.52667	9	2,086.61000	10	2,414.69333	11	2,742.77667
36	118.10000	446.19333	6	774.27667	7	1,105.64083	8	1,433.72417	9	1,761.80750	10	2,088.89083	11	2,417.97417	12	2,747.05750
37	712.31083	449.47417	7	777.55750	8	1,108.92167	9	1,437.05250	10	1,765.08833	11	2,093.17167	12	2,421.25500	13	2,749.33833
38	712.67167	452.75250	9	784.11917	10	1,112.20250	11	440.28583	12	1,768.36917	13	2,096.45250	14	2,424.53583	15	2,752.61917
39	127.95250	456.03583	9	784.83833	10	1,119.19117	11	440.28583	12	1,768.36917	13	2,096.45250	14	2,424.53583	15	2,752.61917
40	131.23333	140	240	787.40000	340	1,115.48333	440	1,443.66667	540	1,771.65000	640	2,098.33333	740	2,427.81667	840	2,755.90000
41	134.51417	462.59750	2	465.87833	3	465.15917	4	1,122.04250	5	1,452.28333	6	1,784.07250	7	2,106.29500	8	2,437.65917
42	137.79500	465.87833	3	469.15917	4	797.24250	5	1,125.32583	6	1,453.40917	7	1,781.49250	8	2,107.65917	9	2,440.94000
43	141.07583	473.61677	4	472.44000	5	800.52333	6	1,128.04750	7	1,456.69000	8	1,784.07250	9	2,112.85667	10	2,446.22083
44	144.35667	475.72083	5	803.00417	6	1,131.88750	7	1,459.97083	8	1,788.05417	9	2,116.13750	10	2,447.50167	11	2,477.30417
45	147.63250	476.60167	6	807.08500	7	1,135.16833	8	1,463.51677	9	1,791.33500	10	2,119.41833	11	2,477.55800	12	2,480.78250
46	150.91833	478.15917	7	810.36583	8	1,141.73000	9	1,466.32520	10	1,794.61583	11	2,122.69317	12	2,482.14667	13	2,484.33333
47	154.19917	482.28250	8	815.46677	9	1,141.73000	10	1,466.32520	11	1,794.61583	12	2,125.89800	13	2,484.33333	14	2,486.242750
48	157.44667	485.56333	8	818.46677	9	1,145.01083	10	1,473.09417	11	1,801.17750	12	2,128.26083	13	2,487.34417	14	2,488.14750
49	160.76083	488.84417	9	816.92750	10	1,145.01083	11	1,473.09417	12	1,801.17750	13	2,128.26083	14	2,487.34417	15	2,488.14750

50	164.04167	492.12500	250	820.20833	350	1,148.29167	450	1,476.37500	550	1,804.45833	650	2,132.54167	750	2,460.62500	850	2,788.70833	950	3,116.79167
1	167.32250	495.40583	1	823.48917	2	1,151.57250	3	1,482.83333	4	1,820.77000	5	2,135.82350	6	2,463.50833	7	2,791.98917	8	3,123.53333
2	170.60333	498.66667	2	826.77000	3	1,154.83333	4	1,486.21750	5	1,821.30083	6	2,137.38417	7	2,467.18667	8	2,795.27000	9	3,125.63447
3	173.88417	501.96750	3	830.65083	4	1,151.16150	5	1,489.65500	6	1,817.58167	7	2,142.473	8	2,473.683	9	2,801.83167	10	3,129.19583
4	177.16500	505.24833	4	833.33167	5	1,161.45000	6	1,492.77917	7	1,820.86250	8	2,148.94583	9	2,477.02917	10	2,805.11250	11	3,133.19583
5	180.44583	508.52917	5	836.61250	6	1,164.69583	7	1,492.77917	8	1,820.86250	9	2,148.94583	10	2,477.02917	11	2,805.11250	12	3,136.47667
6	183.72667	511.81000	6	839.88333	7	1,167.97667	8	1,496.06000	9	1,821.42333	10	2,152.22667	11	2,480.31000	12	2,808.73933	13	3,139.75750
7	187.07500	515.09683	7	843.17417	8	1,171.25750	9	1,499.34683	10	1,827.50000	11	2,155.70500	12	2,483.50983	13	2,811.67417	14	3,143.38333
8	190.28833	518.37167	8	846.45500	9	1,174.53833	10	1,492.62167	11	1,820.70500	12	2,158.78833	13	2,486.87167	14	2,814.95500	15	3,146.31917
9	193.56917	521.65250	9	849.73583	10	1,177.81917	11	1,495.90250	12	1,823.98833	13	2,162.06917	14	2,490.15250	15	2,818.23883	16	3,147.47667
10	196.85000	460	524.93333	260	853.01667	360	1,181.10000	460	1,801.19917	560	1,837.26667	660	2,165.35000	760	2,493.43333	860	2,818.51667	
11	200.13983	528.21417	1	856.57000	2	1,184.38083	3	1,492.46417	4	1,840.54750	5	2,168.63083	6	2,496.71517	7	2,824.79750	8	3,152.88083
12	203.41167	531.49500	2	859.57833	3	1,187.66167	4	1,495.74500	5	1,843.82333	6	2,171.91167	7	2,499.92000	8	2,828.733	9	3,156.16167
13	206.69250	534.77583	3	862.85917	4	1,190.20250	5	1,498.92450	6	1,847.10617	7	2,175.19250	8	2,503.27583	9	3,159.44250		
14	209.97333	538.05667	4	866.46000	5	1,192.23233	6	1,492.30667	7	1,848.39000	8	2,178.47333	9	2,506.55667	10	3,162.72333		
15	213.52417	541.33750	5	869.12803	6	1,197.50417	7	1,525.67850	8	1,853.67083	9	2,181.75417	10	2,509.83703	11	3,168.00417		
16	216.53500	544.61833	6	872.70167	7	1,200.78500	8	1,528.86833	9	1,856.95167	10	2,185.03500	11	2,513.11833	12	2,811.20167		
17	219.81583	547.89917	7	875.98250	8	1,204.05683	9	1,532.14917	10	1,860.23500	11	2,188.31583	12	2,516.72658	13	2,814.49467		
18	223.09667	551.18000	8	879.26333	9	1,207.34667	10	1,535.43800	11	1,863.51333	12	2,191.50667	13	2,519.68900	14	2,817.76333		
19	226.37750	554.46083	9	882.54417	10	1,210.62750	11	1,538.71083	12	1,866.19417	13	2,194.87500	14	2,522.96083	15	2,815.14775		
20	229.65833	170	557.74167	270	885.82500	370	1,213.90833	470	1,541.99167	570	1,870.07500	670	2,198.15833	770	2,526.24167	870	2,834.32500	
21	232.93917	561.02250	1	889.10583	2	1,217.18917	3	1,545.27500	4	1,873.35883	5	2,204.72000	6	2,532.80333	7	2,840.88667	8	3,188.97000
22	236.22000	564.30333	2	892.13687	3	1,220.47000	4	1,548.55333	5	1,876.63667	6	2,208.00883	7	2,536.86417	8	3,192.50803		
23	239.50883	567.58417	3	895.66575	4	1,223.75083	5	1,551.83417	6	1,879.91500	7	2,211.28167	8	2,539.44633	9	3,195.33167		
24	242.87167	570.86500	4	898.94833	5	1,227.03167	6	1,555.11500	7	1,883.19633	8	2,214.28167	9	2,542.64583	10	2,840.72917		
25	246.06250	574.14583	5	902.22917	6	1,230.31260	7	1,558.39583	8	1,886.47917	9	2,217.28333	10	2,545.92667	11	2,847.01000		
26	249.34333	577.42667	6	905.65000	7	1,233.59333	8	1,561.67667	9	1,889.76000	10	2,221.12417	11	2,549.72000	12	2,857.37417		
27	252.62417	580.70570	7	908.79083	8	1,236.87417	9	1,564.95750	10	1,893.04083	11	2,224.40500	12	2,552.48833	13	2,860.57167		
28	255.90500	8	903.98833	9	1,240.15500	10	1,568.28833	11	1,896.32167	12	2,227.66583	13	2,555.76917	14	2,863.85250			
29	259.18583	9	807.26917	10	1,243.43583	11	1,571.51917	12	1,899.60250	13	2,227.66583	14	2,558.33583	15	3,111.35863			
30	262.46667	180	590.55000	280	863.23800	380	1,246.71667	480	1,574.80000	580	1,902.88333	680	2,230.96667	780	2,559.01583	880	2,887.13333	
31	265.74750	1	593.83083	2	1,249.99167	3	1,578.08083	4	1,801.36167	5	2,199.44167	6	2,562.33083	7	2,890.41417	8	3,218.48917	
32	269.02833	2	597.11167	3	1,253.27833	4	1,581.36167	5	1,909.44500	6	2,237.52833	7	2,565.61167	8	2,892.69300	9	3,221.78383	
33	272.30917	3	600.30950	4	1,257.47583	5	1,584.62450	6	1,912.72583	7	2,080.80917	8	2,568.89783	9	3,285.05917			
34	275.59000	4	603.67333	5	1,261.75667	6	1,587.92333	7	1,916.00667	8	2,044.90000	9	2,572.17333	10	3,228.34600			
35	278.87083	5	606.95417	6	1,263.12083	7	1,591.20417	8	1,919.72583	9	2,047.37083	10	2,575.45417	11	3,231.62083			
36	282.15167	610.23500	6	610.31833	7	1,266.40167	8	1,594.38500	9	1,922.56333	10	2,050.61567	11	2,578.73500	12	2,906.81833		
37	285.43250	713.51583	7	616.79667	8	1,269.68250	9	1,597.76583	10	1,925.84917	11	2,053.92500	12	2,582.18247	13	2,913.46333		
38	288.71333	8	616.79667	9	1,272.95333	10	1,601.04667	11	1,929.13000	12	2,055.21333	13	2,585.20667	14	2,913.38000			
39	291.99417	9	620.07750	10	948.16083	11	1,276.24417	12	1,604.32750	13	1,932.41083	14	2,058.57750	15	2,916.60883			
40	295.27500	190	623.35833	290	951.44167	390	1,279.52500	490	1,607.60833	590	1,935.69167	690	2,263.77500	790	2,591.85833	890	2,919.94167	
41	298.55583	1	626.63917	2	954.72250	3	1,282.80583	4	1,610.88917	5	1,938.97250	6	2,267.05583	7	2,595.13917	8	3,251.30583	
42	301.83667	2	629.20000	3	958.00333	4	1,286.06667	5	1,614.07000	6	1,942.25333	7	2,270.33667	8	2,598.42000	9	3,254.58667	
43	305.11750	3	633.20083	4	961.28417	5	1,289.36750	6	1,617.45000	7	1,945.53417	8	2,273.61750	9	2,597.84817	10	3,261.14833	
44	308.39833	4	964.48167	5	964.48167	6	1,292.68333	7	1,619.81500	8	2,076.98833	9	2,933.06500	10	3,264.42917			
45	311.67917	5	639.62650	6	967.44583	7	1,295.92917	8	1,624.01250	9	1,932.09883	10	2,082.17917	11	2,608.26250			
46	314.96000	6	643.04333	7	971.40750	8	1,299.21000	9	1,630.57417	10	1,938.42000	11	2,087.26400	12	2,611.34333			
47	317.24083	7	646.32417	8	974.49083	9	1,302.44908	10	1,630.57417	11	1,938.42000	12	2,087.26400	13	2,612.62667			
48	321.52167	8	649.60500	9	977.68833	10	1,305.71167	11	1,633.65500	12	1,931.93833	13	2,088.10500	14	2,906.18833			
49	324.80250	9	652.88583	10	980.96917	11	1,309.05250	12	1,637.13583	13	1,965.21917	14	2,082.23250	15	2,917.55550			

# LENGTH—MILES TO KILOMETERS

[Reduction factor: 1 mile = 1.60934719 kilometers]

Miles	Kilo-meters	Miles	Kilo-meters	Miles	Kilo-meters	Miles	Kilo-meters	Miles	Kilo-meters	Miles	Kilo-meters	Miles	Kilo-meters	
0	0	160.9347	200	321.8694	300	482.8042	400	643.7389	500	804.6736	600	965.6083	700	1,126.5431
1	1.6093	162.3441	1	232.4788	1	484.3135	1	645.3482	1	806.2830	1	967.2177	1	1,128.1524
2	3.2187	2	164.1534	2	325.0881	2	486.0229	2	646.9376	2	807.8923	2	1,129.7617	
3	4.8280	3	165.7628	3	326.6975	3	487.6322	3	648.5669	3	809.5017	3	970.4364	
4	6.4374	4	167.3721	4	328.3068	4	489.2416	4	650.1763	4	811.1110	4	972.0457	
5	8.0467	5	168.9815	5	329.9162	5	490.8509	5	651.7856	5	812.7203	5	973.6551	
6	9.6561	6	170.5908	6	331.5255	6	492.4602	6	653.3950	6	814.3297	6	974.2644	
7	11.2654	7	172.2002	7	333.1349	7	494.0696	7	655.0043	7	815.9390	7	975.1377	
8	12.8748	8	173.8095	8	334.7442	8	495.6789	8	656.6137	8	817.5484	8	976.4831	
9	14.4841	9	175.4188	9	336.3536	9	497.2883	9	658.2230	9	819.1577	9	980.0925	
10	16.0935	110	177.0282	210	337.9629	310	498.8976	410	659.8324	510	820.7671	610	981.7018	
1	17.7028	1	178.3375	1	500.3070	1	661.4417	1	822.3764	1	982.3112	1	1,142.6365	
2	19.3122	2	180.2469	2	341.1816	2	502.1163	2	663.0511	2	823.9858	2	984.9205	
3	20.9215	3	181.8562	3	342.7910	3	564.7257	3	664.6604	3	825.5951	3	985.5298	
4	22.5309	4	183.4656	4	344.4003	4	505.3350	4	666.2697	4	827.2045	4	988.1392	
5	24.1402	5	185.0749	5	346.0097	5	506.9444	5	667.8791	5	828.8138	5	989.7485	
6	25.7496	6	186.6843	6	347.6190	6	508.4884	6	669.5367	6	830.4232	6	991.3579	
7	27.3589	7	188.2936	7	349.2283	7	510.1631	7	671.0978	7	832.0325	7	992.9672	
8	28.9682	8	189.9030	8	350.8377	8	511.7724	8	672.7071	8	833.6419	8	994.5766	
9	30.5776	9	191.5123	9	352.4470	9	513.3988	9	674.3165	9	835.2512	9	996.1859	
20	32.1869	120	193.1217	220	354.0564	320	514.9911	420	675.9528	520	836.8606	620	997.7933	
1	33.7963	1	194.7310	1	355.6657	1	516.6005	1	677.5532	1	838.4699	1	999.4046	
2	35.4056	2	196.3404	2	357.2751	2	518.2098	2	679.1445	2	840.0792	2	1,001.0140	
3	37.0150	3	197.9497	3	358.8844	3	519.1822	3	680.7329	3	841.6886	3	1,002.6233	
4	38.6243	4	199.5591	4	360.4938	4	521.4285	4	682.3632	4	843.2979	4	1,004.2327	
5	40.2337	5	201.1684	5	362.1031	5	523.0378	5	683.9726	5	844.9073	5	1,007.8420	
6	41.830	6	202.7777	6	363.7125	6	524.6472	6	685.5819	6	846.5166	6	1,007.4514	
7	43.4324	7	204.3871	7	365.3218	7	526.2565	7	687.1913	7	848.1260	7	1,009.0607	
8	45.0617	8	205.9954	8	366.9312	8	527.8659	8	688.8006	8	849.7353	8	1,011.6048	
9	46.6711	9	207.6058	9	368.5405	9	529.4752	9	690.4100	9	851.3447	9	1,012.2794	
30	48.2804	130	209.2151	230	370.1499	230	531.0846	430	692.0193	530	852.9540	630	1,013.8887	
1	49.8898	1	210.8245	1	371.7592	1	532.6399	1	693.6287	1	854.5634	1	1,014.9861	
2	51.4991	2	212.4338	2	373.3686	2	534.3033	2	695.2380	2	856.1727	2	1,017.1074	
3	53.1085	3	214.0432	3	374.9779	3	535.9126	3	696.8473	3	857.7821	3	1,019.7168	
4	54.7178	4	215.6525	4	376.5872	4	537.5220	4	698.4567	4	859.3914	4	1,020.3269	
5	56.3272	5	217.2619	5	378.1966	5	539.1313	5	700.0660	5	861.0008	5	1,021.9355	
6	57.9365	6	218.8712	6	379.8059	6	540.7407	6	701.6754	6	862.6101	6	1,023.5448	
7	59.5458	7	220.4806	7	381.4153	7	542.3500	7	703.2847	7	864.2195	7	1,025.1542	
8	61.1552	8	222.0899	8	383.0246	8	543.9594	8	704.8941	8	865.8288	8	1,026.7635	
9	62.7645	9	223.6993	9	384.6340	9	545.5687	9	706.5034	9	867.4382	9	1,028.3279	
40	64.3739	140	225.3086	240	386.2433	340	547.1781	440	708.1128	540	869.0475	640	1,029.9822	
1	65.9832	1	226.9180	1	387.8327	1	548.7874	1	709.7221	1	870.6568	1	1,031.5916	
2	67.5926	2	228.5273	2	389.4620	2	550.3967	2	711.3315	2	872.2662	2	1,033.2009	
3	69.2019	3	230.1366	3	391.0714	3	552.0061	3	712.9408	3	873.8755	3	1,034.8416	
4	70.8113	4	231.7460	4	392.6807	4	553.6154	4	714.5502	4	875.4849	4	1,036.4196	
5	72.4206	5	233.5553	5	394.3051	5	555.2248	5	715.1959	5	877.0942	5	1,038.0290	
6	74.0300	6	234.9647	6	395.8994	6	556.8341	6	717.7689	6	878.7036	6	1,039.6383	
7	75.6393	7	236.5740	7	397.5088	7	558.4435	7	719.3782	7	880.3129	7	1,041.2477	
8	77.2487	8	238.1834	8	399.1181	8	560.0528	8	720.9876	8	881.9223	8	1,042.8570	
9	78.8580	9	239.7927	9	400.7275	9	561.6622	9	722.5969	9	883.5316	9	1,044.4663	

50	80,4674	150	241,4021	250	402,3368	350	563,2715	450	724,2062	550	885,1410	650	1,046,0757	750	1,207,0104	850	1,367,9451	950	1,528,8799
1	82,0767	1	243,0114	2	244,6208	2	405,5555	1	564,8809	1	886,7503	2	888,3597	2	1,049,2044	1	1,208,6198	1	1,367,9545
2	83,5861	2	246,2301	3	407,1648	3	568,0996	3	729,0343	3	889,9690	3	1,050,9037	3	1,211,8885	2	1,371,1638	2	1,520,0989
3	85,8954	4	247,8393	5	251,7742	4	569,0869	4	720,6436	4	891,5784	4	1,052,1513	4	1,213,4478	3	1,372,732	3	1,533,7079
4	86,9047	5	249,4488	6	410,3835	5	571,3183	5	732,2530	5	893,1877	5	1,054,1224	5	1,215,0572	5	1,375,9919	5	1,536,9266
5	88,5141	6	90,1234	6	251,0582	6	411,9929	6	727,9276	6	894,7971	6	1,054,7318	6	1,216,6665	6	1,377,6012	6	1,538,5359
7	91,7328	7	252,6675	7	413,6022	7	574,5730	7	735,4717	7	896,4064	7	1,057,3411	7	1,218,2758	7	1,379,2106	7	1,540,1453
8	93,3421	8	254,2769	8	415,2116	8	576,1463	8	737,0810	8	898,0157	8	1,058,9305	8	1,219,8852	8	1,380,2199	8	1,541,7546
9	94,9515	9	255,8862	9	416,8309	9	738,6904	9	899,6251	9	1,060,5598	9	1,221,4945	9	1,382,4293	9	1,543,3640		
60	96,5608	160	257,4956	260	418,4303	360	579,3557	460	740,2997	560	901,2344	660	1,062,1692	760	1,224,1039	860	1,384,0386	960	1,544,9733
1	98,702	1	259,1049	1	420,0396	1	580,9743	1	741,9091	1	902,8338	1	1,063,7785	1	1,224,7132	1	1,385,6480	1	1,546,5827
2	99,7795	2	260,7142	2	421,6490	2	582,5837	2	743,5184	2	904,4531	2	1,065,3879	2	1,226,3226	2	1,387,2573	2	1,548,1920
3	101,3889	3	262,3236	3	423,2583	3	584,2190	3	745,1278	3	906,0625	3	1,067,9972	3	1,227,3919	3	1,388,8666	3	1,549,3014
4	102,9982	4	263,9329	4	424,8677	4	585,8024	4	746,7371	4	907,6718	4	1,068,6066	4	1,229,3413	4	1,390,4760	4	1,551,4107
5	104,6076	5	265,5423	5	426,4770	5	587,4111	5	748,3465	5	909,2812	5	1,070,2155	5	1,231,1506	5	1,392,0853	5	1,553,0201
6	106,2169	6	267,1516	6	428,0864	6	589,0111	6	749,9558	6	910,8905	6	1,071,8252	6	1,232,7600	6	1,393,6947	6	1,554,6284
7	107,8263	7	268,7610	7	429,6957	7	590,6304	7	751,5652	7	912,4999	7	1,073,4346	7	1,234,3693	7	1,395,3040	7	1,556,2386
8	109,4356	8	270,3703	8	431,3051	8	592,2938	8	751,7145	8	914,1982	8	1,075,0359	8	1,235,9787	8	1,396,9134	8	1,557,3481
9	111,0450	9	271,9797	9	432,9144	9	593,8491	9	754,7838	9	915,7186	9	1,076,6333	9	1,237,5880	9	1,398,5227	9	1,559,4575
70	112,6543	170	273,5890	270	434,5237	370	595,4585	470	756,3932	570	917,3279	670	1,078,2626	770	1,239,1974	870	1,400,1321	970	1,561,0668
1	114,2637	1	275,1984	1	436,1331	1	597,0768	1	758,0025	1	918,9373	2	920,5466	2	1,081,4813	2	1,242,4161	2	1,401,7414
2	115,8730	2	276,8077	2	437,7424	2	598,6772	2	759,6119	2	920,5466	3	1,083,9097	3	1,244,0254	3	1,404,9601	3	1,564,2855
3	117,4823	3	278,4171	3	439,3518	3	600,2865	3	761,2212	3	922,1560	4	1,085,7653	4	1,245,6347	4	1,406,5674	4	1,567,3042
4	119,0917	4	280,0264	4	440,9611	4	601,8959	4	762,8336	4	923,7653	5	1,086,3094	5	1,247,2441	5	1,408,1788	5	1,569,1135
5	120,7010	5	281,6358	5	442,5705	5	603,5052	5	764,4399	5	925,3747	6	1,087,9187	6	1,248,6534	6	1,409,7882	6	1,570,7229
6	122,3104	6	283,2451	6	445,1798	6	605,1145	6	766,0493	6	926,9840	7	1,089,5981	7	1,250,4628	7	1,411,3975	7	1,573,3322
7	123,9197	7	284,8545	7	445,7892	7	606,7239	7	767,6586	7	928,5933	8	1,091,1974	8	1,252,0721	8	1,413,0659	8	1,573,9416
8	125,5291	8	286,4638	8	447,3985	8	608,3332	8	769,2680	8	930,2027	9	1,093,8120	9	1,253,6815	9	1,414,6162	9	1,575,5509
9	127,1384	9	288,0732	9	449,0079	9	609,9426	9	770,8773	9	931,3120	9	1,094,7468	9	1,255,8815	9	1,414,6162	9	1,575,5509
80	128,7478	180	289,6825	280	450,6172	380	611,5519	480	774,4867	580	933,4214	680	1,094,3361	780	1,255,2908	880	1,417,8349	980	1,577,1603
1	130,3571	1	291,2918	1	452,2266	1	613,1613	1	774,0960	1	935,0307	2	936,6401	2	1,097,5748	2	1,258,5095	2	1,419,4442
2	131,9665	2	292,9012	2	453,8359	2	614,7076	2	775,7054	2	937,1513	3	1,099,1842	3	1,260,1189	3	1,421,0536	3	1,580,3790
3	133,5758	3	294,5105	3	455,4453	3	616,3800	3	777,3147	3	938,4944	4	1,099,3858	4	1,261,7289	4	1,422,6629	4	1,581,8883
4	135,1852	4	296,1199	4	457,0546	4	617,9893	4	778,9241	4	940,5858	5	1,099,4681	5	1,262,4028	5	1,424,2723	5	1,585,2070
5	136,7945	5	297,7292	5	458,6640	5	780,5334	5	782,1427	5	943,0775	6	1,104,0122	6	1,264,9469	6	1,425,8916	6	1,586,8164
6	138,4039	6	299,3386	6	460,2733	6	621,0280	6	783,7521	7	944,6898	7	1,105,6315	7	1,266,5563	7	1,427,9110	7	1,588,4237
7	140,0132	7	300,9479	7	461,5827	7	622,8174	7	785,3614	8	946,2962	8	1,107,2309	8	1,268,1636	8	1,429,1003	8	1,590,0351
9	143,2319	9	304,1666	9	465,4920	9	626,0361	9	786,9708	9	947,9055	9	1,108,8402	9	1,269,7750	9	1,430,7097	9	1,591,6444
90	144,8412	190	305,7760	290	466,7107	390	627,6454	490	788,5801	590	949,5149	690	1,110,4496	790	1,271,3843	890	1,432,3190	990	1,593,2537
1	146,4506	1	307,3853	1	468,3200	1	629,2548	1	790,1895	1	951,1242	2	932,7336	2	1,112,0589	2	1,233,9284	1	1,594,8631
2	148,0590	2	308,9497	2	469,9294	2	630,8641	2	791,7988	2	952,7336	3	1,113,6683	3	1,234,6030	3	1,435,5577	2	1,596,4724
3	149,6693	3	310,6040	3	471,5387	3	632,4735	3	793,4082	3	954,3429	4	1,114,2776	3	1,236,2133	3	1,437,1471	3	1,598,0818
4	151,2786	4	312,2134	4	473,1481	4	634,0828	4	795,0175	4	957,5522	5	1,115,2817	4	1,237,4864	4	1,438,5654	4	1,599,6911
5	152,8880	5	313,8227	5	474,7574	5	635,6922	5	796,6269	5	957,5616	6	1,116,4963	5	1,239,4310	5	1,440,3658	5	1,601,3008
6	154,4973	6	315,4321	6	476,3668	6	637,3015	6	797,2362	6	958,1709	6	1,120,1057	6	1,241,9571	6	1,441,9571	6	1,602,9988
7	156,1067	7	317,0414	7	477,9761	7	638,9108	7	799,8456	7	960,7803	8	1,121,7150	7	1,242,6497	7	1,443,5815	7	1,604,5192
8	157,7160	8	318,6507	8	479,3855	8	640,5022	8	801,4549	8	962,3898	8	1,123,3344	8	1,244,2591	8	1,445,1938	8	1,606,1285
9	159,3254	9	320,2601	9	481,1948	9	642,1205	9	803,0643	9	963,9990	9	1,124,9337	9	1,245,8684	9	1,446,8031	9	1,607,7379

## LENGTH—KILOMETERS TO MILES

[Reduction factor: r kilometer=0.621369949 mile]

Kilo-meters	Miles	Kilo-meters	Miles	Kilo-meters	Miles	Kilo-meters	Miles	Kilo-meters	Miles	Kilo-meters	Miles	Kilo-meters	Miles	Kilo-meters	Miles	
0	0	62.13699	200	124.27399	300	186.41098	400	248.54798	500	310.68978	600	372.82197	700	434.95866	800	
1	0.62137	62.75836	201	124.89536	301	187.03235	401	249.16935	501	311.30634	601	373.44334	701	437.71733	801	
2	1.24274	63.37973	202	125.51673	302	187.65572	402	249.79072	502	311.92771	602	374.06471	702	438.38670	802	
3	1.86411	64.00110	203	126.18319	303	188.27509	403	250.41209	503	312.54908	603	374.68608	703	438.56007	803	
4	2.48548	64.62247	204	126.75947	304	188.89646	404	251.03346	504	313.17045	604	375.30745	704	439.44444	804	
5	3.10685	65.24384	205	127.50884	305	189.51783	405	251.65483	505	313.79182	605	375.92882	705	438.55651	805	
6	3.72822	65.86521	206	128.13922	306	190.13920	406	252.26260	506	314.41319	606	376.55019	706	438.68718	806	
7	4.34959	66.48658	207	128.62358	307	190.76657	407	252.89757	507	315.03456	607	377.17156	707	439.30855	807	
8	4.97096	67.10795	208	129.24495	308	191.38194	408	253.52084	508	315.65593	608	377.79293	708	439.93922	808	
9	5.59233	67.72932	209	129.86632	309	192.00331	409	254.14031	509	316.22730	609	378.41430	709	440.51129	809	
10	6.21370	68.35069	210	130.48769	310	192.62468	410	254.76168	510	316.89867	610	379.03567	710	441.17266	810	
1	6.83507	68.97206	211	131.10906	311	193.24056	411	255.40305	511	317.52004	611	379.49043	711	441.47111	811	
2	7.45644	69.58943	212	131.73043	312	193.86542	412	256.00442	512	318.14141	612	380.27284	712	442.41540	812	
3	8.07781	70.21180	213	132.35110	313	194.48879	413	256.62579	513	318.76278	613	380.89978	713	443.03677	813	
4	8.69918	70.83617	214	132.93717	314	195.11016	414	257.24716	514	319.38451	614	381.52115	714	443.68184	814	
5	9.32055	71.45754	215	133.59454	315	195.73153	415	257.86853	515	320.00252	615	382.14252	715	444.27951	815	
6	9.94192	72.07891	216	134.21591	316	196.97297	416	258.48990	516	320.62689	616	382.76389	716	444.95525	816	
7	10.56329	72.70028	217	134.83728	317	197.61227	417	259.11127	517	321.24826	617	383.35526	717	445.52225	817	
8	11.18466	73.32165	218	135.45865	318	197.59644	418	259.73264	518	321.86963	618	384.00663	718	446.14362	818	
9	11.80603	73.94302	219	136.08002	319	198.21701	419	260.33401	519	322.49100	619	384.62800	719	446.76499	819	
20	12.42740	74.56439	220	136.70139	320	198.83835	420	260.97538	520	323.11237	620	385.24937	720	447.38636	820	
1	13.04877	75.18767	221	137.32276	321	199.45575	421	261.59675	521	323.73374	621	385.80704	721	448.00773	821	
2	13.67014	75.80713	222	137.94413	322	200.08112	422	262.21812	522	324.35511	622	386.49211	722	448.62910	822	
3	14.29151	76.42850	223	138.56550	323	200.70349	423	262.83999	523	324.97048	623	387.13438	723	449.30047	823	
4	14.91288	77.04987	224	139.18687	324	201.32386	424	263.46086	524	325.59785	624	387.73485	724	449.87184	824	
5	15.53425	77.67124	225	139.80824	325	201.94523	425	264.08223	525	326.21922	625	388.36262	725	450.49321	825	
6	16.15562	78.29261	226	140.42966	326	202.56660	426	264.70360	526	326.84059	626	388.97759	726	451.11458	826	
7	16.77669	78.91398	227	141.05998	327	203.18997	427	265.32497	527	327.46196	627	389.5896	727	451.73595	827	
8	17.39836	79.53335	228	141.67255	328	203.80594	428	265.96434	528	328.08633	628	390.20233	728	452.33732	828	
9	18.01973	80.15672	229	142.29372	329	204.43071	429	266.58771	529	328.70470	629	390.81701	729	452.97869	829	
:30	18.64110	80.77809	230	142.91509	330	205.05208	430	267.18908	530	329.32607	630	391.46307	730	453.60006	830	
1	19.26247	81.39946	231	143.53783	331	206.67452	431	267.81045	531	329.94744	631	392.08444	731	454.22143	831	
2	19.88384	82.02083	232	144.15783	332	206.2982	432	268.43182	532	330.56681	632	392.70581	732	454.84280	832	
3	20.50211	82.64220	233	144.77930	333	206.91619	433	269.05319	533	331.19018	633	393.32718	733	455.46417	833	
4	21.12368	83.36357	234	145.40057	334	207.53116	434	269.64156	534	331.81155	634	393.94855	734	456.08554	834	
5	21.74795	83.88494	235	146.02194	335	208.15993	435	270.20593	535	332.43292	635	394.56992	735	456.70691	835	
6	22.36932	84.50631	236	146.64331	336	208.78030	436	270.91730	536	333.05249	636	395.19129	736	457.32828	836	
7	22.99069	85.12768	237	147.26468	337	209.40167	437	271.53867	537	333.67566	637	395.81266	737	457.94965	837	
8	23.61206	85.74905	238	147.88605	338	210.02304	438	272.18004	538	334.39703	638	396.43003	738	458.57102	838	
9	24.23343	86.37042	239	148.50742	339	210.64441	439	272.78141	539	334.91840	639	397.05440	739	459.19239	839	
40	24.83480	140	86.99179	240	149.12879	340	211.30278	440	273.402415	540	335.53977	640	397.66767	740	459.18276	840
1	25.47617	141	87.61316	241	149.75016	341	211.88715	441	274.02415	541	336.16114	641	398.28814	741	460.43513	841
2	26.09754	142	88.23453	242	150.37153	342	212.50552	442	274.64552	542	336.78251	642	398.91951	742	461.40560	842
3	26.71891	143	88.85590	243	150.99209	343	213.12989	443	275.88826	543	337.40398	643	399.54088	743	462.02524	843
4	27.34028	144	89.47727	244	151.61427	344	213.75126	444	276.46689	544	338.02525	644	400.16252	744	462.2924	844
5	27.96165	145	90.09864	245	152.23564	345	214.37263	445	277.10300	545	338.64662	645	400.78362	745	462.52061	845
6	28.58302	146	90.72001	246	152.85701	346	214.99040	446	277.13100	546	339.26799	646	401.49499	746	463.54198	846
7	29.20439	147	91.34138	247	153.47838	347	215.61537	447	277.75237	547	339.88036	647	402.02636	747	464.16335	847
8	29.82576	148	91.96275	248	154.09975	348	216.23674	448	278.37374	548	340.51073	648	402.64773	748	464.78472	848
9	30.44713	149	92.58412	249	154.71211	349	216.85211	449	278.99511	549	341.13210	649	403.26910	749	465.40609	849

559.23295

558.85432

558.50803

558.31210

558.13647

557.90309

557.73816

557.55953

557.38857

557.21097

557.04159

556.88090

556.71027

556.54304

556.37233

556.20159

556.04606

50	31.06850	250	93.20549	350	217.47948	450	279.61648	550	341.75347	650	403.89047	750	466.02746	850	528.16446	950	590.30145
1	31.68987	1	93.22866	1	155.95386	1	218.10085	1	280.23785	1	342.37484	1	404.51184	1	528.78583	1	590.2282
2	32.31124	2	94.44823	2	156.58523	2	218.22222	2	280.85922	2	342.99621	2	405.13321	2	529.40220	2	591.54419
3	32.93261	3	95.06860	3	157.20660	3	219.44559	3	281.61758	3	343.61758	3	467.89157	3	530.12857	3	592.16555
4	33.53398	4	95.69097	4	157.82797	4	219.66966	4	282.18019	4	344.73445	4	468.51294	4	530.64994	4	592.78693
5	34.17535	5	96.31234	5	158.44934	5	220.58633	5	282.72333	5	344.86032	5	466.99732	5	531.27131	5	593.40830
6	34.76767	6	96.33871	6	159.07071	6	221.30770	6	283.34470	6	345.48169	6	467.61866	6	531.99268	6	594.02967
7	35.45518	7	97.55508	7	159.69208	7	221.29077	7	283.96607	7	346.24006	7	468.37075	7	532.1405	7	594.63104
8	36.03946	8	98.17645	8	160.31345	8	222.45044	8	284.58744	8	346.72443	8	470.99826	8	533.13542	8	595.89378
9	36.66083	9	98.79782	9	160.93422	9	223.07181	9	285.20881	9	347.34580	9	469.48280	9	533.75679	9	595.89378
60	37.28220	160	99.41919	260	161.55619	360	223.69318	460	285.83018	560	347.96717	660	410.10417	760	472.21116	860	536.51515
1	37.93037	1	100.44956	1	162.31155	1	224.33932	2	287.07292	2	349.20991	2	411.34691	2	473.48233	2	537.75789
2	38.52494	2	100.66193	2	162.79835	2	224.42030	3	287.55729	3	349.83128	3	414.96828	3	474.10527	3	539.37226
3	39.14631	3	101.28330	3	163.42030	4	226.17866	4	288.31566	4	350.45265	4	412.58965	4	474.72664	4	536.86364
4	39.76768	4	101.90467	4	164.04167	5	226.80003	5	288.93703	5	351.07402	5	413.21102	5	475.48001	5	537.48501
5	40.38905	5	102.32604	5	164.66304	6	227.12140	6	289.55840	6	351.83239	6	414.83239	6	476.96938	6	538.72755
6	41.01042	6	103.47471	6	165.28441	7	228.04277	7	290.17977	7	352.31676	7	414.45376	7	476.59075	7	538.72755
7	41.63179	7	103.76878	7	165.90578	7	228.44277	7	290.17977	7	352.31676	7	414.45376	7	476.59075	7	538.72755
8	42.23316	8	104.39015	8	167.14822	9	228.80114	8	228.80114	9	353.81913	8	477.80153	9	539.34912	8	601.10748
9	42.87453	9	105.01152	9	167.14822	9	229.28551	9	291.42251	9	353.35952	9	415.96950	9	539.70949	9	602.10748
70	43.49590	170	105.63329	270	167.76989	370	229.90688	470	292.04388	570	354.18087	670	416.31787	770	478.45486	870	540.59186
1	44.11727	1	106.25226	1	168.39126	1	230.52225	2	291.66525	2	354.80224	2	417.50661	2	479.57159	2	603.35022
2	44.78664	2	106.87563	2	169.01265	3	231.49626	3	293.26662	3	356.04948	3	418.18198	3	480.31897	3	604.59296
3	45.36001	3	107.49709	3	169.63400	3	231.70799	4	294.52936	4	356.66635	4	419.80355	4	480.94034	4	605.33570
4	45.98138	4	108.11837	4	170.85537	5	232.39237	5	295.15073	5	357.28787	5	419.42472	5	481.56171	5	605.33570
5	46.60275	5	108.73974	5	170.87674	6	233.01373	6	295.77210	6	357.90909	6	420.04609	6	482.18308	6	606.45707
6	47.22412	6	109.65111	6	171.48981	7	234.55847	7	297.39347	7	358.33016	7	420.66746	7	484.94415	7	607.07844
7	47.84549	7	109.98248	7	172.11948	8	234.01484	8	297.74085	8	359.15183	8	421.28885	8	483.42582	8	607.69361
8	48.46686	8	110.60385	8	172.74085	9	235.49921	9	297.36322	9	359.77320	9	421.91020	9	484.04719	9	608.32118
80	49.70960	180	111.84659	280	173.98359	380	236.2058	480	298.25758	580	360.39457	680	422.31597	780	484.66826	880	560.94255
1	50.33097	1	112.46795	1	174.60496	1	236.14915	2	298.87895	2	361.63271	2	423.77431	2	485.91130	2	568.44830
2	50.92324	2	113.08933	2	175.26533	2	237.46332	3	299.50032	3	362.25868	3	425.01705	3	486.53267	3	604.80656
3	51.53705	3	113.71070	3	175.84770	4	238.86066	4	300.74306	4	362.88003	4	425.17107	4	487.15044	4	611.48203
4	52.19508	4	114.33207	4	176.48907	5	239.08044	5	301.36443	5	363.30142	5	425.63884	5	487.77541	5	612.04940
5	52.81645	5	114.95344	5	177.09044	6	239.98580	6	304.12799	6	364.52970	6	426.59077	6	550.53278	6	612.67077
6	53.43782	6	115.57543	6	177.71181	7	178.33318	7	302.60717	7	364.14116	7	426.88116	7	489.01815	7	613.20214
7	54.05919	7	116.19618	7	178.95455	8	241.9154	8	303.22854	8	365.36533	8	427.50253	8	489.63932	8	613.91531
8	54.68056	8	116.81795	9	179.57592	9	241.71291	9	303.84991	9	365.98690	9	428.12390	9	490.26089	9	552.39789
9	55.30193	9	117.43892	9	179.57592	9	241.71291	9	303.84991	9	365.98690	9	428.12390	9	490.26089	9	614.53488
90	55.92330	190	118.06029	290	180.19729	390	242.33428	490	304.47128	590	366.08287	690	428.74527	790	490.88226	890	553.01926
1	56.54467	1	118.68166	1	180.81866	2	242.05565	2	305.71492	2	367.65101	2	429.33664	2	491.50363	2	553.64062
2	57.16694	2	119.30503	2	181.49033	3	244.9839	3	306.35539	3	368.47238	3	430.60937	3	492.74657	3	554.88336
3	57.78741	3	119.92440	3	182.06140	4	244.68277	4	306.95676	4	369.49135	4	303.23074	4	493.50473	4	617.64173
4	58.40878	4	120.54577	4	183.49176	5	245.44113	5	307.57812	5	369.71512	5	431.85211	5	493.98911	5	618.26310
5	59.03015	5	121.16714	5	183.30414	6	246.60650	6	308.19949	6	370.33649	6	432.47348	6	494.61048	6	618.88447
6	59.65152	6	121.78851	6	183.92551	7	246.98877	7	308.20896	7	370.9576	7	433.04985	7	495.23195	7	619.50584
7	60.20988	7	122.40988	8	184.56857	8	247.30524	8	309.44223	8	371.71622	8	433.59232	8	495.83322	8	557.9021
8	60.89426	8	123.03125	9	185.16824	9	247.78961	9	310.06360	9	372.20060	9	434.33759	9	496.47459	9	558.6158

# AREA—ACRES TO HECTARES

[Reduction factor: 1 acre = 0.404687261 hectare]

	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares
0	0	0	100	40.46863	200	80.93745	300	121.40618	400	161.87490	500	202.34363	600	242.81236
1	1	0.40469	1	40.87341	2	81.34214	3	121.81087	4	162.77959	5	202.74832	6	243.21704
2	2	0.80937	2	41.27810	3	81.74683	4	121.25155	5	162.68428	6	203.15301	7	243.62173
3	3	1.21406	3	41.68279	4	82.15151	5	122.62024	6	163.08897	7	203.55769	8	243.02642
4	4	1.61875	4	42.08748	5	82.55620	6	123.02935	7	163.49365	8	203.96238	9	244.43111
5	5	2.02344	5	42.49216	6	82.96089	7	123.42861	8	163.89834	9	204.36707	10	245.83579
6	6	2.42812	6	42.89685	7	83.36558	8	123.83340	9	164.30303	10	204.77175	11	245.20408
7	7	2.83281	7	43.30154	8	73.77026	9	164.70772	10	165.58120	11	205.58113	12	245.64517
8	8	3.23750	8	43.70622	9	84.17495	10	124.64368	11	165.35180	12	205.49852	13	246.49454
9	9	3.64219	9	44.11091	10	84.57964	11	125.04836	12	165.51709	13	205.92632	14	246.93271
10	10	4.04687	110	44.51560	210	84.98432	310	125.45305	410	165.92178	510	206.39050	610	246.85923
11	11	44.92029	210	85.38901	220	125.85774	320	166.22643	420	166.32666	520	166.79315	620	247.68896
12	12	45.32497	220	85.70370	230	126.25155	330	166.67611	430	167.13584	530	167.07329	630	248.54202
13	13	45.72966	230	86.19839	240	126.65711	340	167.54053	440	167.54053	540	167.48670	640	248.47798
14	14	46.13435	240	86.60367	250	127.07160	350	167.94521	450	168.41394	550	168.88267	650	249.35139
15	15	46.53904	250	87.00776	260	127.47649	360	168.34990	460	168.81863	560	169.28735	660	249.56068
16	16	46.94372	260	87.41245	270	127.88117	370	168.74549	470	169.62949	570	170.06977	670	250.16294
17	17	47.32843	270	87.81714	280	128.28586	380	169.15928	480	169.90553	580	170.48280	680	250.56545
18	18	47.75310	280	88.22182	290	128.69055	390	169.59524	490	169.53936	590	170.03269	690	250.50141
19	19	48.16696	290	88.67778	300	129.09524	400	169.99992	500	170.43738	600	250.90610	700	250.97014
20	20	0.9375	120	48.56265	220	89.03120	320	129.49992	420	169.99634	520	210.84264	620	251.31079
21	21	48.98483	120	49.96716	230	89.43588	330	129.94061	430	170.37334	530	211.24657	630	251.71548
22	22	50.40312	120	49.37185	240	89.84057	340	130.39390	440	170.77802	540	211.71871	640	252.12016
23	23	50.82765	120	30.70181	250	90.24556	350	130.81939	450	171.11867	550	212.05612	650	252.54835
24	24	51.72419	120	49.77789	260	90.64995	360	131.18122	460	171.58740	560	212.48608	660	252.98954
25	25	52.11718	120	50.58391	270	91.05463	370	131.52336	470	171.99209	570	212.86550	670	253.33423
26	26	52.51807	120	50.98959	280	91.45932	380	131.92805	480	172.39677	580	213.27019	680	253.78981
27	27	52.92656	120	51.39528	290	91.86401	390	132.32733	490	172.80146	590	213.70487	690	254.14360
28	28	53.31214	120	51.79997	300	92.26870	400	132.73742	500	173.20613	600	213.80745	700	254.61233
29	29	53.75593	120	52.20466	310	92.67338	410	133.14211	510	173.61083	610	214.07956	710	254.88747
30	30	12.14062	130	52.60934	220	93.07807	320	133.54680	420	174.01552	520	214.48425	620	254.92979
31	31	53.54531	130	53.01043	230	93.42976	330	133.98567	430	174.12420	530	214.88994	630	255.35766
32	32	54.94999	130	53.41872	240	93.88744	340	134.36517	440	174.82490	540	215.29262	640	255.76235
33	33	55.35468	130	53.82341	250	94.29213	350	134.70686	450	175.29598	550	215.99383	650	256.16704
34	34	55.75937	130	54.22939	260	94.69682	360	135.63555	460	175.63427	560	216.10300	660	256.51717
35	35	56.16405	130	54.63278	270	95.10151	370	135.70233	470	176.03896	570	216.50768	670	256.97641
36	36	56.56874	130	55.03747	280	95.90519	380	135.97492	480	176.44365	580	216.91237	680	257.38110
37	37	56.97343	130	55.44215	290	95.91088	390	136.37961	490	176.84833	590	217.31705	690	257.78579
38	38	57.37812	130	55.84684	300	95.91587	400	136.78239	500	177.21775	600	218.19047	700	258.19541
39	39	57.78280	130	56.25153	310	96.72026	410	137.18898	510	177.65771	610	218.12643	710	258.55116
40	40	16.18749	140	56.65622	240	97.12494	340	137.59367	440	178.06239	540	218.53112	640	258.99835
41	41	16.59218	140	57.06090	250	97.52963	350	137.98367	450	178.46707	550	218.93581	650	259.40453
42	42	16.99686	140	57.46559	260	97.94342	360	138.40304	460	178.81767	560	219.34050	660	259.80226
43	43	17.40155	140	57.87028	270	98.33900	370	138.80733	470	179.21242	570	219.74518	670	260.23191
44	44	17.80624	140	58.27497	280	98.74369	380	139.6114	480	179.61114	580	220.44987	680	260.81752
45	45	18.21093	140	58.67965	290	99.14838	390	139.61711	490	180.08583	590	220.95256	690	261.02328
46	46	18.61561	140	59.08434	300	99.55307	400	140.09522	500	180.49052	600	221.42797	700	261.49201
47	47	19.0230	140	59.48903	310	99.95737	410	140.83117	510	180.83117	610	221.36393	710	262.33266
48	48	19.42499	140	59.89371	320	100.36244	420	141.80211	520	181.29989	620	221.76682	720	262.23735
49	49	19.82969	140	60.20460	330	100.70713	430	141.25385	530	182.00767	630	222.17331	730	262.64203

50	20,23436	150	60,70309	250	101,17182	350	141,64054	450	182,10927	550	222,57799	650	263,04672	750	303,51545	850	343,98417	950	384,45290																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
1	20,63905	1	61,10778	2	61,51246	1	101,57630	2	101,98119	3	101,91715	4	101,44842	5	102,32184	6	103,19536	7	103,72653	8	103,62249	9	104,00463	10	104,49059	11	104,81400	12	104,34527	13	105,17145	14	105,83311	15	105,22780	16	105,61321	17	105,53590	18	105,63,34785	19	105,23,47186	20	105,9,67177	21	105,23,06717	22	105,26,60467	23	105,26,70936	24	105,27,11405	25	105,28,51873	26	105,29,92342	27	105,30,32811	28	105,31,79683	29	105,32,170	30	105,33,281	31	105,34,7280	32	105,35,13748	33	105,36,5217	34	105,37,94686	35	105,38,3154	36	105,39,7623	37	105,40,6992	38	105,41,45619	39	105,42,39215	40	105,43,68,7963	41	105,44,21052	42	105,45,1090	43	105,46,88431	44	105,47,01510	45	105,48,58277	46	105,49,67,98746	47	105,50,32656	48	105,51,70936	49	105,52,17,789	50	105,53,6,64681	51	105,54,17,77340	52	105,55,6,67,70936	53	105,56,17,7589	54	105,57,6,67,70936	55	105,58,17,7589	56	105,59,6,67,70936	57	105,60,17,7589	58	105,61,6,67,70936	59	105,62,17,7589	60	105,63,6,67,70936	61	105,64,17,7589	62	105,65,6,67,70936	63	105,66,17,7589	64	105,67,6,67,70936	65	105,68,17,7589	66	105,69,6,67,70936	67	105,70,17,7589	68	105,71,6,67,70936	69	105,72,17,7589	70	105,73,6,67,70936	71	105,74,17,7589	72	105,75,6,67,70936	73	105,76,17,7589	74	105,77,6,67,70936	75	105,78,17,7589	76	105,79,6,67,70936	77	105,80,17,7589	78	105,81,6,67,70936	79	105,82,17,7589	80	105,83,6,67,70936	81	105,84,17,7589	82	105,85,6,67,70936	83	105,86,17,7589	84	105,87,6,67,70936	85	105,88,17,7589	86	105,89,6,67,70936	87	105,90,17,7589	88	105,91,6,67,70936	89	105,92,17,7589	90	105,93,6,67,70936	91	105,94,17,7589	92	105,95,6,67,70936	93	105,96,17,7589	94	105,97,6,67,70936	95	105,98,17,7589	96	105,99,6,67,70936	97	105,100,17,7589	98	105,101,6,67,70936	99	105,102,17,7589	100	105,103,6,67,70936	101	105,104,17,7589	102	105,105,6,67,70936	103	105,106,17,7589	104	105,107,6,67,70936	105	105,108,17,7589	106	105,109,6,67,70936	107	105,110,17,7589	108	105,111,6,67,70936	109	105,112,17,7589	110	105,113,6,67,70936	111	105,114,17,7589	112	105,115,6,67,70936	113	105,116,17,7589	114	105,117,6,67,70936	115	105,118,17,7589	116	105,119,6,67,70936	117	105,120,17,7589	118	105,121,6,67,70936	119	105,122,17,7589	120	105,123,6,67,70936	121	105,124,17,7589	122	105,125,6,67,70936	123	105,126,17,7589	124	105,127,6,67,70936	125	105,128,17,7589	126	105,129,6,67,70936	127	105,130,17,7589	128	105,131,6,67,70936	129	105,132,17,7589	130	105,133,6,67,70936	131	105,134,17,7589	132	105,135,6,67,70936	133	105,136,17,7589	134	105,137,6,67,70936	135	105,138,17,7589	136	105,139,6,67,70936	137	105,140,17,7589	138	105,141,6,67,70936	139	105,142,17,7589	140	105,143,6,67,70936	141	105,144,17,7589	142	105,145,6,67,70936	143	105,146,17,7589	144	105,147,6,67,70936	145	105,148,17,7589	146	105,149,6,67,70936	147	105,150,17,7589	148	105,151,6,67,70936	149	105,152,17,7589	150	105,153,6,67,70936	151	105,154,17,7589	152	105,155,6,67,70936	153	105,156,17,7589	154	105,157,6,67,70936	155	105,158,17,7589	156	105,159,6,67,70936	157	105,160,17,7589	158	105,161,6,67,70936	159	105,162,17,7589	160	105,163,6,67,70936	161	105,164,17,7589	162	105,165,6,67,70936	163	105,166,17,7589	164	105,167,6,67,70936	165	105,168,17,7589	166	105,169,6,67,70936	167	105,170,17,7589	168	105,171,6,67,70936	169	105,172,17,7589	170	105,173,6,67,70936	171	105,174,17,7589	172	105,175,6,67,70936	173	105,176,17,7589	174	105,177,6,67,70936	175	105,178,17,7589	176	105,179,6,67,70936	177	105,180,17,7589	178	105,181,6,67,70936	179	105,182,17,7589	180	105,183,6,67,70936	181	105,184,17,7589	182	105,185,6,67,70936	183	105,186,17,7589	184	105,187,6,67,70936	185	105,188,17,7589	186	105,189,6,67,70936	187	105,190,17,7589	188	105,191,6,67,70936	189	105,192,17,7589	190	105,193,6,67,70936	191	105,194,17,7589	192	105,195,6,67,70936	193	105,196,17,7589	194	105,197,6,67,70936	195	105,198,17,7589	196	105,199,6,67,70936	197	105,200,17,7589	198	105,201,6,67,70936	199	105,202,17,7589	200	105,203,6,67,70936	201	105,204,17,7589	202	105,205,6,67,70936	203	105,206,17,7589	204	105,207,6,67,70936	205	105,208,17,7589	206	105,209,6,67,70936	207	105,210,17,7589	208	105,211,6,67,70936	209	105,212,17,7589	210	105,213,6,67,70936	211	105,214,17,7589	212	105,215,6,67,70936	213	105,216,17,7589	214	105,217,6,67,70936	215	105,218,17,7589	216	105,219,6,67,70936	217	105,220,17,7589	218	105,221,6,67,70936	219	105,222,17,7589	220	105,223,6,67,70936	221	105,224,17,7589	222	105,225,6,67,70936	223	105,226,17,7589	224	105,227,6,67,70936	225	105,228,17,7589	226	105,229,6,67,70936	227	105,230,17,7589	228	105,231,6,67,70936	229	105,232,17,7589	230	105,233,6,67,70936	231	105,234,17,7589	232	105,235,6,67,70936	233	105,236,17,7589	234	105,237,6,67,70936	235	105,238,17,7589	236	105,239,6,67,70936	237	105,240,17,7589	238	105,241,6,67,70936	239	105,242,17,7589	240	105,243,6,67,70936	241	105,244,17,7589	242	105,245,6,67,70936	243	105,246,17,7589	244	105,247,6,67,70936	245	105,248,17,7589	246	105,249,6,67,70936	247	105,250,17,7589	248	105,251,6,67,70936	249	105,252,17,7589	250	105,253,6,67,70936	251	105,254,17,7589	252	105,255,6,67,70936	253	105,256,17,7589	254	105,257,6,67,70936	255	105,258,17,7589	256	105,259,6,67,70936	257	105,260,17,7589	258	105,261,6,67,70936	259	105,262,17,7589	260	105,263,6,67,70936	261	105,264,17,7589	262	105,265,6,67,70936	263	105,266,17,7589	264	105,267,6,67,70936	265	105,268,17,7589	266	105,269,6,67,70936	267	105,270,17,7589	268	105,271,6,67,70936	269	105,272,17,7589	270	105,273,6,67,70936	271	105,274,17,7589	272	105,275,6,67,70936	273	105,276,17,7589	274	105,277,6,67,70936	275	105,278,17,7589	276	105,279,6,67,70936	277	105,280,17,7589	278	105,281,6,67,70936	279	105,282,17,7589	280	105,283,6,67,70936	281	105,284,17,7589	282	105,285,6,67,70936	283	105,286,17,7589	284	105,287,6,67,70936	285	105,288,17,7589	286	105,289,6,67,70936	287	105,290,17,7589	288	105,291,6,67,70936	289	105,292,17,7589	290	105,293,6,67,70936	291	105,294,17,7589	292	105,295,6,67,70936	293	105,296,17,7589	294	105,297,6,67,70936	295	105,298,17,7589	296	105,299,6,67,70936	297	105,300,17,7589	298	105,301,6,67,70936	299	105,302,17,7589	300	105,303,6,67,70936	301	105,304,17,7589	302	105,305,6,67,70936	303	105,306,17,7589	304	105,307,6,67,70936	305	105,308,17,7589	306	105,309,6,67,70936	307	105,310,17,7589	308	105,311,6,67,70936	309	105,312,17,7589	310	105,313,6,67,70936	311	105,314,17,7589	312	105,315,6,67,70936	313	105,316,17,7589	314	105,317,6,67,70936	315	105,318,17,7589	316	105,319,6,67,70936	317	105,320,17,7589	318	105,321,6,67,70936	319	105,322,17,7589	320	105,323,6,67,70936	321	105,324,17,7589	322	105,325,6,67,70936	323	105,326,17,7589	324	105,327,6,67,70936	325	105,328,17,7589	326	105,329,6,67,70936	327	105,330,17,7589	328	105,331,6,67,70936	329	105,332,17,7589	330	105,333,6,67,70936	331	105,334,17,7589	332	105,335,6,67,70936	333	105,336,17,7589	334	105,337,6,67,70936	335	105,338,17,7589	336	105,339,6,67,70936	337	105,340,17,7589	338	105,341,6,67,70936	339	105,342,17,7589	340	105,343,6,67,70936	341	105,344,17,7589	342	105,345,6,67,70936	343	105,346,17,7589	344	105,347,6,67,70936	345	105,348,17,7589	346	105,349,6,67,70936	347	105,350,17,7589	348	105,351,6,67,70936	349	105,352,17,7589	350	105,353,6,67,70936	351	105,354,17,7589	352	105,355,6,67,70936	353	105,356,17,7589	354	105,357,6,67,70936	355	105,358,17,7589	356	105,359,6,67,70936	357	105,360,17,7589	358	105,361,6,67,70936	359	105,362,17,7589	360	105,363,6,67,70936	361	105,364,17,7589	362	105,365,6,67,70936	363	105,366,17,7589	364	105,367,6,67,70936	365	105,368,17,7589	366	105,369,6,67,70936	367	105,370,17,7589	368	105,371,6,67,70936	369	105,372,17,7589	370	105,373,6,67,70936	371	105,374,17,7589	372	105,375,6,67,70936	373	105,376,17,7589	374	105,377,6,67,70936	375	105,378,17,7589	376	105,379,6,67,70936	377	105,380,17,7589	378	105,381,6,67,70936	379	105,382,17,7589	380	105,383,6,67,70936	381	105,384,17,7589	382	105,385,6,67,70936	383	105,386,17,7589	384	105,387,6,67,70936	385	105,388,17,7589	386	105,389,6,67,70936	387	105,390,17,7589	388	105,391,6,67,70936	389	105,392,17,7589	390	105,393,6,67,70936	391	105,394,17,7589	392	105,395,6,67,70936	393	105,396,17,7589	394	105,397,6,67,70936	395	105,398,17,7589	396	105,399,6,67,70936	397	105,400,17,7589	398	105,401,6,67,70936	399	105,402,17,7589	400	105,403,6,67,70936	401	105,404,17,7589	402	105,405,6,67,70936	403	105,406,17,7589	404	105,407,6,67,70936	405	105,408,17,7589	406	105,409,6,67,70936	407	105,410,17,7589	408	105,411,6,67,70936	409	105,412,17,7589

AREA—HECTARES TO ACRES

Reduction factor: 1 hectare = 2.471043930 acres

38

	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres
0	247.10439	200	494.20879	300	741.31318	400	988.41757	500	1,235.52197	600	1,482.62636	700	1,729.73075	800
1	249.57544	1	496.67983	1	743.78422	1	950.88962	1	1,237.98301	1	1,485.97074	1	1,732.20180	1
2	252.06468	2	499.15087	2	746.25527	2	953.55966	2	1,240.46405	2	1,487.56845	2	1,734.67884	2
3	254.51752	3	501.62192	3	748.76231	3	955.31075	3	1,245.95310	4	1,490.03494	3	1,737.14388	3
4	256.88857	4	504.69296	4	751.19735	4	958.30175	4	1,245.40614	4	1,492.50153	4	1,739.11493	4
5	259.45961	5	506.56405	5	756.66840	5	1,000.72729	5	1,247.87718	5	1,494.98158	5	1,741.48597	5
6	261.93066	6	509.35056	6	756.15944	6	1,003.42384	6	1,250.38232	6	1,497.45262	6	1,744.55070	6
7	264.40170	7	511.50609	7	758.61049	7	1,005.11488	7	1,252.81927	7	1,499.33677	7	1,747.02806	7
8	266.87274	8	513.52527	8	761.08153	8	1,008.18592	8	1,255.29032	8	1,497.49910	8	1,749.39950	8
9	269.34379	9	516.44818	9	763.53257	9	1,010.05869	9	1,257.76136	9	1,504.86575	9	1,751.07015	9
10	271.81483	10	518.91923	10	766.02362	10	1,013.12801	10	1,260.23240	10	1,507.33680	10	1,754.44119	10
11	274.25588	11	521.39027	11	768.49466	11	1,015.59906	11	1,262.70345	11	1,509.80784	11	1,756.91223	11
12	276.72992	12	523.86531	12	770.95571	12	1,018.10700	12	1,265.11749	12	1,512.78889	12	1,759.38232	12
13	279.62357	13	526.33236	13	773.43675	13	1,020.34114	13	1,267.64534	13	1,514.79933	13	1,761.55329	13
14	281.69901	14	528.80340	14	775.90779	14	1,023.27019	14	1,270.11658	14	1,517.20997	14	1,764.25337	14
15	284.17005	15	531.27444	15	778.37884	15	1,025.48323	15	1,272.58762	15	1,519.69202	15	1,766.79641	15
16	286.64110	16	533.74549	16	780.84988	16	1,027.05527	16	1,275.05867	16	1,522.16306	16	1,769.26745	16
17	289.12124	17	536.21653	17	783.32059	17	1,030.52356	17	1,277.52971	17	1,524.63411	17	1,771.38505	17
18	291.58139	18	538.68758	18	785.79197	18	1,032.89636	18	1,280.00076	18	1,527.16515	18	1,774.09554	18
19	294.05423	19	541.15862	19	788.26301	19	1,035.36741	19	1,282.47180	19	1,529.57619	19	1,777.68059	19
20	296.52527	20	543.62966	20	790.73406	20	1,037.83845	20	1,284.92484	20	1,532.04724	20	1,777.15163	20
21	298.96332	21	546.10071	21	793.20510	21	1,040.80949	21	1,287.41389	21	1,534.51828	21	1,781.62267	21
22	301.46736	22	548.57175	22	795.67615	22	1,042.80854	22	1,289.88493	22	1,536.98922	22	1,784.99272	22
23	303.98404	23	551.04520	23	798.14719	23	1,045.27263	23	1,293.35598	23	1,539.40337	23	1,786.36756	23
24	305.94045	24	553.51384	24	800.61828	24	1,048.22563	24	1,294.82702	24	1,541.93141	24	1,789.03381	24
25	308.88049	25	555.08828	25	803.08928	25	1,052.91637	25	1,297.28806	25	1,545.40246	25	1,791.50685	25
26	311.35154	26	558.55939	26	805.56032	26	1,052.66471	26	1,299.76911	26	1,546.87350	26	1,793.01216	26
27	313.82258	27	560.22997	27	808.03137	27	1,055.13576	27	1,302.24015	27	1,549.34454	27	1,796.44894	27
28	316.29362	28	563.86902	28	810.50241	28	1,060.60680	28	1,304.71120	28	1,551.81559	28	1,800.91988	28
29	318.76467	29	565.86906	29	812.97345	29	1,060.07785	29	1,307.18224	29	1,554.28663	29	1,801.39103	29
30	321.23571	30	568.34010	30	815.44450	30	1,062.54880	30	1,309.65328	30	1,556.75768	30	1,803.86207	30
31	323.70675	31	571.81115	31	817.91554	31	1,065.01993	31	1,312.12433	31	1,559.22872	31	1,806.33311	31
32	326.17780	32	573.28219	32	820.36865	32	1,067.99898	32	1,316.58537	32	1,561.99767	32	1,808.00416	32
33	328.64455	33	575.75224	33	822.85763	33	1,069.26028	33	1,317.06641	33	1,564.17081	33	1,811.75230	33
34	331.11989	34	578.22428	34	824.32867	34	1,072.94037	34	1,321.53746	34	1,566.61815	34	1,813.14624	34
35	333.59093	35	580.69332	35	827.79927	35	1,074.90411	35	1,322.00850	35	1,569.11290	35	1,816.21729	35
36	336.06197	36	583.16637	36	830.27076	36	1,077.97515	36	1,324.47955	36	1,571.58394	36	1,818.68833	36
37	338.53392	37	585.57374	37	832.74180	37	1,077.84650	37	1,326.94848	37	1,574.04948	37	1,821.55038	37
38	341.00406	38	588.10846	38	835.21265	38	1,082.31224	38	1,329.42163	38	1,576.56263	38	1,823.03042	38
39	343.47511	39	590.57950	39	837.66839	39	1,084.78829	39	1,331.89268	39	1,578.99707	39	1,826.10146	39
40	345.94615	40	593.05054	40	840.34372	40	1,087.59333	40	1,336.83477	40	1,581.46812	40	1,828.75251	40
41	348.17119	41	595.52159	41	842.62598	41	1,089.33037	41	1,336.83477	41	1,583.93161	41	1,831.04555	41
42	350.88824	42	597.99263	42	847.09702	42	1,092.20412	42	1,339.30581	42	1,586.41020	42	1,833.51460	42
43	353.35923	43	600.46367	43	847.59807	43	1,094.76746	43	1,341.79765	43	1,588.89564	43	1,833.98664	43
44	355.93472	44	603.03911	44	850.14350	44	1,097.14350	44	1,344.24790	44	1,591.33229	44	1,838.15647	44
45	358.30137	45	605.40376	45	852.51016	45	1,099.06155	45	1,349.81557	45	1,593.82334	45	1,843.39877	45
46	360.77241	46	607.87681	46	854.98120	46	1,102.08559	46	1,349.18994	46	1,596.24388	46	1,843.39877	46
47	363.24346	47	610.34785	47	857.45224	47	1,104.55664	47	1,351.66103	47	1,598.76542	47	1,845.26788	47
48	365.71450	48	612.81097	48	860.91872	48	1,107.12077	48	1,354.13207	48	1,601.23647	48	1,848.34086	48
49	368.18555	49	615.28994	49	862.39343	49	1,109.49872	49	1,356.60312	49	1,603.70751	49	1,850.31190	49

50	123,55220	250	617,70098	350	864,86538	450	1,111,86977	550	1,339,07416	650	1,606,17855	750	1,853,28295	850	2,100,38734	950	2,347,49178
51	126,02324	1	620,23203	1	867,33642	1	1,114,04081	1	1,361,54521	1	1,608,64960	1	1,855,75999	1	2,102,85388	1	2,349,96278
52	128,49428	2	622,70307	2	869,80746	2	1,116,19186	2	1,361,01625	2	1,611,12064	2	1,858,22504	2	2,105,32943	2	2,342,43382
53	130,56593	3	378,06972	3	872,27851	3	1,119,38290	3	1,366,48729	3	1,613,59169	3	1,860,69068	3	2,107,80047	3	2,334,90487
54	133,43687	4	380,50407	4	874,74955	4	1,121,85394	4	1,368,95834	4	1,616,06273	4	1,863,16712	4	2,110,27512	4	2,337,37591
55	135,90742	5	383,01181	5	877,22060	5	1,124,52499	5	1,370,49238	5	1,618,53377	5	1,865,38171	5	2,112,74256	5	2,339,84695
56	138,37846	6	385,44285	6	879,69164	6	1,126,79603	6	1,373,90043	6	1,621,00482	6	1,868,10921	6	2,115,21360	6	2,362,31800
57	140,84950	7	387,93390	7	878,16268	7	1,129,26708	7	1,376,37147	7	1,625,47586	7	1,870,58026	7	2,117,68465	7	2,364,78904
58	143,32055	8	390,42494	8	884,63373	8	1,131,73812	8	1,378,84251	8	1,625,54691	8	1,873,05193	8	2,120,15599	8	2,367,26009
59	145,71919	9	392,85598	9	887,10477	9	1,134,20916	9	1,381,31356	9	1,628,41795	9	1,875,52234	9	2,122,62674	9	2,369,73113
60	148,26264	160	395,36703	260	642,47142	360	889,57581	460	1,136,68021	560	1,383,78460	660	1,630,88899	760	1,877,99339	860	2,125,09778
61	150,73686	1	397,83807	1	644,94247	1	894,04686	1	1,139,15125	1	1,386,25564	1	1,633,36304	1	1,882,93008	1	2,127,67882
62	152,20472	2	400,30912	2	647,41351	2	894,51790	2	1,141,62230	2	1,388,72659	2	1,635,83108	2	1,882,93457	2	2,130,03897
63	155,67575	3	402,8016	3	649,88485	3	896,98895	3	1,144,09334	3	1,391,19773	3	1,637,30213	3	1,884,51091	3	2,132,15199
64	158,14681	4	405,25120	4	652,35560	4	899,45959	4	1,146,56438	4	1,393,66878	4	1,640,73117	4	1,887,87756	4	2,134,91961
65	160,61786	5	407,72225	5	654,82664	5	901,93103	5	1,149,03543	5	1,396,13982	5	1,643,24421	5	1,890,34861	5	2,137,45300
66	163,08890	6	410,19329	6	657,29759	6	904,40208	6	1,151,50647	6	1,398,61086	6	1,645,71526	6	1,892,81965	6	2,138,38744
67	165,59994	7	412,66434	7	659,79752	7	906,87312	7	1,153,97527	7	1,401,08191	7	1,648,18630	7	1,895,29069	7	2,139,49848
68	168,03999	8	415,13538	8	662,23977	8	909,34417	8	1,156,44856	8	1,403,53295	8	1,650,63735	8	1,897,76174	8	2,140,86613
69	170,50203	9	417,60642	9	664,71082	9	1,159,91960	9	1,000,02400	9	1,653,12339	9	1,900,23278	9	2,147,33718	9	2,194,97052
70	172,97308	170	420,07477	270	914,28625	470	1,161,59065	570	1,408,49504	670	1,655,59943	770	1,902,70983	870	2,149,80822	970	2,306,91261
71	175,44412	1	422,54851	1	669,18128	1	1,163,86169	1	1,410,69608	1	1,658,07048	1	1,905,17487	1	2,152,27926	1	2,339,38366
72	177,91516	2	425,01956	2	672,12395	2	1,166,33273	2	1,413,22373	2	1,660,54152	2	1,907,64591	2	2,154,75031	2	2,340,85470
73	180,38621	3	427,49060	3	674,94939	3	1,168,69393	3	1,415,90817	3	1,663,01257	3	1,917,22135	3	2,140,42574	3	2,343,23274
74	182,85775	4	429,96164	4	677,06604	4	924,17043	4	1,171,27482	4	1,418,37922	4	1,665,48361	4	1,912,58800	4	2,149,62940
75	185,38282	5	432,43269	5	679,53708	5	926,64147	5	1,173,74587	5	1,420,85026	5	1,667,95465	5	1,915,05905	5	2,149,26783
76	187,79934	6	434,90373	6	682,08812	6	929,11252	6	1,176,21691	6	1,423,31230	6	1,670,45750	6	1,917,53009	6	2,141,73888
77	190,20738	7	437,37478	7	684,77917	7	930,87795	7	1,178,82795	7	1,425,79235	7	1,672,89674	7	1,917,10553	7	2,147,24718
78	192,74143	8	439,84582	8	686,50281	8	934,05461	8	1,181,15900	8	1,428,62339	8	1,675,36778	8	1,916,68096	8	2,149,15201
79	195,21247	9	442,31686	9	689,42126	9	936,52565	9	1,183,33004	9	1,430,73444	9	1,677,83883	9	1,914,94322	9	2,172,04761
80	197,68351	180	444,78791	280	691,89230	380	928,99669	480	1,186,10109	580	1,433,20548	680	1,680,30987	780	1,927,41427	880	2,174,51866
81	200,15456	1	447,25895	1	694,36334	1	930,72713	1	1,188,15213	1	1,435,67652	1	1,682,70932	1	1,928,88353	1	2,176,98970
82	202,65665	2	449,73000	2	696,83349	2	943,93878	2	1,191,04317	2	1,438,14757	2	1,685,23916	2	1,932,35635	2	2,179,22135
83	205,20978	3	452,20104	3	699,30543	3	948,88093	3	1,193,15122	3	1,440,61861	3	1,687,72300	3	1,934,82740	3	2,181,40173
84	207,56790	4	454,67208	4	701,77648	4	951,35191	4	1,195,38526	4	1,443,8966	4	1,690,19405	4	1,937,29444	4	2,184,49283
85	210,38265	5	457,14313	5	704,24752	5	951,45631	5	1,198,44631	5	1,445,56070	5	1,692,66509	5	1,939,76449	5	2,186,87388
86	212,50978	6	462,08521	6	706,71856	6	956,29400	6	1,200,22375	6	1,448,03174	6	1,695,13614	6	1,942,24053	6	2,187,34492
87	214,58028	7	462,45187	7	709,18961	7	956,62000	7	1,203,93839	7	1,450,70279	7	1,697,07822	7	1,944,28701	7	2,188,39140
88	216,92281	8	464,55626	8	711,66065	8	958,76504	8	1,205,66944	8	1,452,97383	8	1,700,07827	8	1,945,18262	8	2,189,24435
89	217,42730	9	467,02730	9	714,13170	9	961,23659	9	1,208,34048	9	1,455,44487	9	1,702,5927	9	1,949,65366	9	2,190,75805
90	222,39395	190	469,49835	290	716,60274	390	963,70713	490	1,210,81153	590	1,457,91509	690	1,705,02681	790	1,932,12471	890	2,199,22910
91	224,86500	1	471,96939	1	719,07378	1	966,17818	1	1,213,28257	1	1,460,38696	1	1,707,49136	1	1,944,59575	1	2,201,70014
92	227,33664	2	474,44043	2	721,54483	2	968,64922	2	1,215,75361	2	1,462,8801	2	1,708,96240	2	1,957,06679	2	2,204,17119
93	229,80799	3	476,91148	3	724,01587	3	971,12026	3	1,218,22466	3	1,465,32905	3	1,712,43344	3	1,959,53784	3	2,206,64223
94	232,27813	4	479,38252	4	726,48862	4	973,59131	4	1,220,89570	4	1,467,80009	4	1,714,90449	4	1,962,00888	4	2,209,11327
95	234,74917	5	481,85357	5	728,95796	5	976,06235	5	1,223,16675	5	1,470,27114	5	1,717,37553	5	1,964,47992	5	2,211,58432
96	237,22012	6	484,32461	6	731,42900	6	978,53340	6	1,225,63779	6	1,472,74218	6	1,719,84658	6	1,966,95987	6	2,214,05336
97	239,69126	7	486,79565	7	733,90007	7	981,00444	7	1,228,10883	7	1,475,21323	7	1,722,31762	7	1,969,42201	7	2,216,52644
98	242,16231	8	489,26670	8	736,37109	8	983,47548	8	1,230,79388	8	1,477,68427	8	1,724,78866	8	1,971,89309	8	2,218,99745
99	244,63335	9	491,73774	9	738,84214	9	985,94653	9	1,233,05992	9	1,480,15531	9	1,727,25971	9	1,974,36410	9	2,221,44849

## VOLUME—CUBIC YARDS TO CUBIC METERS

[Reduction factor: 1 cubic yard = 0.7645594453 cubic meter]

Cubic yards		Cubic meters		Cubic yards		Cubic meters		Cubic yards		Cubic meters		Cubic yards		Cubic meters		Cubic yards			
yards	meters	yards	meters	yards	meters	yards	meters	yards	meters	yards	meters	yards	meters	yards	meters	yards	meters		
0	0	76,45594	77,22050	200	152,91189	300	229,36783	400	305,82378	500	382,27972	600	458,73567	700	535,19161	800	611,64256	900	688,10350
1	0	7,65456	7,77,28566	2	153,67645	1	230,13239	1	306,58834	1	383,04428	1	459,50932	1	535,35617	1	612,41212	1	688,58806
2	1	59,9112	59,9112	2	154,44101	2	230,89695	2	307,35590	2	383,08684	2	460,24749	2	536,17068	2	613,41213	2	689,63202
3	2	2,23368	2,23368	3	78,14962	3	231,66151	3	308,11746	3	384,57340	3	461,09395	3	537,48526	3	613,41423	3	690,39718
4	3	8,0824	8,0824	4	59,51418	4	232,46067	4	308,88202	4	385,33796	4	461,79390	4	538,44695	4	614,70759	4	691,16174
5	4	3,82280	3,82280	5	156,97013	5	156,73446	5	233,19063	5	309,64645	5	386,10252	5	462,55846	5	539,01441	5	615,47035
6	5	5,47336	5,47336	6	157,49992	6	233,95519	6	311,41113	6	386,86708	6	463,33302	6	539,17887	6	616,33991	6	692,59096
7	6	5,31929	5,31929	7	158,26381	7	234,71975	7	311,73656	7	387,6164	7	464,08758	7	540,54353	7	617,19947	7	693,45526
8	8	6,11648	6,11648	8	82,74742	8	159,02836	8	235,48451	8	311,94025	8	388,39620	8	464,85214	8	541,30809	8	617,21998
9	9	6,86104	6,86104	9	83,36988	9	159,79292	9	237,24887	9	311,10481	9	389,16076	9	465,61670	9	542,07265	9	618,2859
10	10	7,64559	7,64559	210	84,10154	210	161,55748	310	237,01343	410	313,42393	510	389,92532	610	466,38126	710	542,83721	810	619,29315
11	11	8,41015	8,41015	1	84,66610	1	161,32204	1	237,77797	1	314,23393	1	390,68988	1	467,14582	1	543,60171	1	616,51395
12	12	9,17471	9,17471	2	85,33066	2	162,08660	2	238,54225	2	314,99849	2	391,45444	2	467,91038	2	544,36633	2	620,82227
13	13	9,92927	9,92927	3	86,39521	3	162,85116	3	239,35111	3	315,16005	3	392,21900	3	468,61494	3	545,38988	3	621,80733
14	14	10,70383	10,70383	4	87,15978	4	163,15757	4	240,07167	4	316,32761	4	392,13111	4	469,85544	4	545,45139	4	622,80733
15	15	11,48839	11,48839	5	87,24234	5	164,38028	5	240,86263	5	317,29217	5	393,74811	5	470,98862	5	546,66000	5	619,57189
16	16	12,22935	12,22935	6	88,88989	6	165,14484	6	241,60078	6	318,50673	6	394,51267	6	470,98862	6	547,42436	6	623,88051
17	17	12,97571	12,97571	7	89,15346	7	165,90940	7	242,36534	7	318,82129	7	395,27723	7	471,73318	7	548,18912	7	624,64507
18	18	13,7207	13,7207	8	90,12801	8	163,67396	8	243,12990	8	319,58885	8	396,01479	8	472,49774	8	548,25368	8	625,80633
19	19	14,56663	14,56663	9	90,38257	9	167,43846	9	243,89446	9	320,35041	9	396,80635	9	473,26230	9	549,71824	9	626,17119
20	20	15,26119	15,26119	120	91,74713	220	168,20308	320	244,65902	420	321,11497	520	397,57091	620	474,02686	720	550,48280	820	626,93875
21	1	16,05753	16,05753	2	92,51169	2	169,96764	1	231,79753	1	311,42192	1	394,74792	1	474,21496	1	552,01792	1	620,57730
22	2	16,83031	16,83031	3	93,27625	3	169,73220	2	246,18184	2	312,64409	2	399,11003	2	475,55597	2	552,01926	2	628,47678
23	3	17,58487	17,58487	4	94,04881	4	170,49676	3	243,40865	3	314,86459	3	399,86459	3	476,32053	3	552,77648	3	629,23242
24	4	18,39493	18,39493	5	94,80537	4	171,26133	4	247,71726	4	314,17220	4	400,62915	4	478,08509	4	553,34104	4	630,45293
25	5	19,13399	19,13399	6	95,56993	5	172,02588	5	248,48182	5	324,33776	5	401,39371	5	477,84965	5	554,30560	5	630,76154
26	6	19,87855	19,87855	7	97,63411	7	173,79043	6	250,12638	6	325,20732	6	402,92283	6	478,61421	6	555,07016	6	631,26110
27	7	21,40766	21,40766	8	97,96361	8	174,31955	7	250,01094	7	326,16688	7	402,92283	7	479,37879	7	555,83472	7	632,29066
28	9	22,17222	22,17222	9	98,42817	9	175,08411	9	251,54006	9	327,31444	9	403,68739	8	480,14333	8	556,59928	8	633,01522
29	10	22,93675	22,93675	130	99,39273	230	175,84867	330	252,30462	430	328,76056	530	405,21651	630	481,67245	730	558,12840	830	634,58343
30	30	23,71314	23,71314	100	100,15729	1	176,61323	1	253,09018	1	329,52512	1	405,98107	1	482,45701	1	558,89290	1	635,48980
31	2	24,45590	24,45590	2	100,18864	2	177,37779	3	254,83747	3	329,58380	3	331,05244	2	407,51018	2	482,20157	2	560,11346
32	3	25,20464	25,20464	3	101,18864	3	178,14235	3	254,59830	3	331,81880	3	407,51018	3	483,96613	3	560,42207	3	636,87802
33	4	25,9502	25,9502	4	102,15897	4	179,90691	4	255,36285	4	322,18180	4	408,27474	4	484,73069	4	561,18663	4	637,64258
34	5	26,79598	26,79598	5	103,21553	5	179,61747	5	256,12741	5	322,58336	5	409,03930	5	485,45252	5	561,95119	5	638,49714
35	6	27,55244	27,55244	6	103,38008	6	180,43603	6	256,89197	6	333,34917	6	409,80386	6	486,25981	6	562,86375	6	639,17170
36	7	28,32870	28,32870	7	104,44644	7	181,20059	8	257,63653	7	327,11248	7	410,56842	7	487,04347	7	563,48031	7	639,13626
37	8	29,03236	29,03236	8	101,96515	8	181,96515	8	258,43109	8	334,37704	8	411,33228	8	487,08933	8	564,24487	8	640,70892
38	9	29,81782	29,81782	9	106,27376	9	182,72971	9	259,18565	9	335,64160	9	412,09754	9	488,55349	9	565,00943	9	641,46337
39	40	50,52338	50,52338	140	107,03832	240	175,94927	340	259,95021	440	326,46016	540	409,31804	640	489,31804	740	558,77399	840	642,22993
41	41	31,36494	31,36494	1	107,08288	1	184,25883	1	260,71477	1	327,17072	1	413,63666	1	566,53835	1	642,99495	1	719,45044
42	2	32,11510	32,11510	2	108,36744	2	185,02339	2	261,47933	2	327,93527	2	414,39122	2	567,30311	2	643,59495	2	720,21500
43	3	32,86769	32,86769	3	109,33220	3	185,78795	3	262,34839	3	328,69983	3	415,15578	3	568,46767	3	644,52361	3	720,97956
44	4	33,60662	33,60662	4	110,09656	4	186,53255	4	263,00845	4	329,61439	4	416,39204	4	568,83223	4	645,88784	4	721,74412
45	5	34,40518	34,40518	5	110,86112	5	187,61122	5	264,32295	5	326,53757	5	416,68490	5	569,59679	5	646,05273	5	722,50864
46	6	35,16973	35,16973	6	111,62268	6	188,08162	6	264,53757	6	326,53757	6	417,44946	6	569,50940	6	646,03615	6	723,27374
47	7	36,93429	36,93429	7	112,39024	7	188,84618	7	265,30213	7	321,75807	7	418,21402	7	567,12891	7	647,58185	7	724,03779
48	8	36,68885	36,68885	8	103,55480	8	180,43603	8	266,06669	8	320,51074	8	419,87314	8	567,44352	8	648,34641	8	725,66503
49	9	37,43341	37,43341	9	113,19193	9	109,37550	9	266,33213	9	323,28763	9	413,28213	9	567,00943	9	649,16908	9	725,65025

50	38.22797	150	114.68392	350	267.59581	450	344.05175	550	420.50769	650	496.96364	750	573.41958	850	649.87553	950	726.33147	
50	1	115.444848	2	116.21304	3	116.97765	4	117.74215	5	118.50671	6	119.71127	7	120.03583	8	121.20039	9	121.50095
50	2	192.66888	3	192.12492	4	192.77225	5	193.43544	6	194.1860	7	195.7225	8	196.88934	9	198.0290		
50	3	200.5002	4	201.31437	5	202.07193	6	203.17625	7	204.13797	8	204.90193	9	205.66649	10	207.47884		
50	4	208.4269	5	209.58563	6	210.62319	7	211.68143	8	212.44599	9	213.21055	10	214.19617	11	215.06076		
50	5	216.90407	6	217.85636	7	218.62319	8	219.38775	9	220.15331	10	220.90825	11	221.72224	12	222.54448		
50	6	224.46269	7	225.42679	8	226.38236	9	227.34544	10	228.3085	11	229.27224	12	230.23536	13	231.20851		
50	7	232.42679	8	233.38236	9	234.34544	10	235.3085	11	236.27224	12	237.23536	13	238.20851	14	239.17277		
50	8	238.42679	9	239.38236	10	240.34544	11	241.3085	12	242.27224	13	243.23536	14	244.20851	15	245.17277		
50	9	244.42679	10	245.38236	11	246.34544	12	247.3085	13	248.27224	14	249.23536	15	250.20851	16	251.17277		
50	10	250.42679	11	251.38236	12	252.34544	13	253.3085	14	254.27224	15	255.23536	16	256.20851	17	257.17277		
50	11	256.42679	12	257.38236	13	258.34544	14	259.3085	15	260.27224	16	261.23536	17	262.20851	18	263.17277		
50	12	262.42679	13	263.38236	14	264.34544	15	265.3085	16	266.27224	17	267.23536	18	268.20851	19	269.17277		
50	13	268.42679	14	269.38236	15	270.34544	16	271.3085	17	272.27224	18	273.23536	19	274.20851	20	275.17277		
50	14	274.42679	15	275.38236	16	276.34544	17	277.3085	18	278.27224	19	279.23536	20	280.20851	21	281.17277		
50	15	280.42679	16	281.38236	17	282.34544	18	283.3085	19	284.27224	20	285.23536	21	286.20851	22	287.17277		
50	16	286.42679	17	287.38236	18	288.34544	19	289.3085	20	290.27224	21	291.23536	22	292.20851	23	293.17277		
50	17	292.42679	18	293.38236	19	294.34544	20	295.3085	21	296.27224	22	297.23536	23	298.20851	24	299.17277		
50	18	298.42679	19	299.38236	20	300.34544	21	301.3085	22	302.27224	23	303.23536	24	304.20851	25	305.17277		
50	19	300.42679	20	301.38236	21	302.34544	22	303.3085	23	304.27224	24	305.23536	25	306.20851	26	307.17277		
50	20	306.42679	21	307.38236	22	308.34544	23	309.3085	24	310.27224	25	311.23536	26	312.20851	27	313.17277		
50	21	312.42679	22	313.38236	23	314.34544	24	315.3085	25	316.27224	26	317.23536	27	318.20851	28	319.17277		
50	22	318.42679	23	319.38236	24	320.34544	25	321.3085	26	322.27224	27	323.23536	28	324.20851	29	325.17277		
50	23	324.42679	24	325.38236	25	326.34544	26	327.3085	27	328.27224	28	329.23536	29	330.20851	30	331.17277		
50	24	330.42679	25	331.38236	26	332.34544	27	333.3085	28	334.27224	29	335.23536	30	336.20851	31	337.17277		
50	25	336.42679	26	337.38236	27	338.34544	28	339.3085	29	340.27224	30	341.23536	31	342.20851	32	343.17277		
50	26	342.42679	27	343.38236	28	344.34544	29	345.3085	30	346.27224	31	347.23536	32	348.20851	33	349.17277		
50	27	348.42679	28	349.38236	29	350.34544	30	351.3085	31	352.27224	32	353.23536	33	354.20851	34	355.17277		
50	28	354.42679	29	355.38236	30	356.34544	31	357.3085	32	358.27224	33	359.23536	34	360.20851	35	361.17277		
50	29	360.42679	30	361.38236	31	362.34544	32	363.3085	33	364.27224	34	365.23536	35	366.20851	36	367.17277		
50	30	366.42679	31	367.38236	32	368.34544	33	369.3085	34	370.27224	35	371.23536	36	372.20851	37	373.17277		
50	31	372.42679	32	373.38236	33	374.34544	34	375.3085	35	376.27224	36	377.23536	37	378.20851	38	379.17277		
50	32	378.42679	33	379.38236	34	380.34544	35	381.3085	36	382.27224	37	383.23536	38	384.20851	39	385.17277		
50	33	384.42679	34	385.38236	35	386.34544	36	387.3085	37	388.27224	38	389.23536	39	390.20851	40	391.17277		
50	34	390.42679	35	391.38236	36	392.34544	37	393.3085	38	394.27224	39	395.23536	40	396.20851	41	397.17277		
50	35	396.42679	36	397.38236	37	398.34544	38	399.3085	39	400.27224	40	401.23536	41	402.20851	42	403.17277		
50	36	402.42679	37	403.38236	38	404.34544	39	405.3085	40	406.27224	41	407.23536	42	408.20851	43	409.17277		
50	37	408.42679	38	409.38236	39	410.34544	40	411.3085	41	412.27224	42	413.23536	43	414.20851	44	415.17277		
50	38	414.42679	39	415.38236	40	416.34544	41	417.3085	42	418.27224	43	419.23536	44	420.20851	45	421.17277		
50	39	421.42679	40	422.38236	41	423.34544	42	424.3085	43	425.27224	44	426.23536	45	427.20851	46	428.17277		
50	40	428.42679	41	429.38236	42	430.34544	43	431.3085	44	432.27224	45	433.23536	46	434.20851	47	435.17277		
50	41	430.42679	42	431.38236	43	432.34544	44	433.3085	45	434.27224	46	435.23536	47	436.20851	48	437.17277		
50	42	436.42679	43	437.38236	44	438.34544	45	439.3085	46	440.27224	47	441.23536	48	442.20851	49	443.17277		
50	43	441.42679	44	442.38236	45	443.34544	46	444.3085	47	445.27224	48	446.23536	49	447.20851	50	448.17277		
50	44	448.42679	45	449.38236	46	450.34544	47	451.3085	48	452.27224	49	453.23536	50	454.20851	51	455.17277		
50	45	455.42679	46	456.38236	47	457.34544	48	458.3085	49	459.27224	50	460.23536	51	461.20851	52	462.17277		
50	46	462.42679	47	463.38236	48	464.34544	49	465.3085	50	466.27224	51	467.23536	52	468.20851	53	469.17277		
50	47	469.42679	48	470.38236	49	471.34544	50	472.3085	51	473.27224	52	474.23536	53	475.20851	54	476.17277		
50	48	476.42679	49	477.38236	50	478.34544	51	479.3085	52	480.27224	53	481.23536	54	482.20851	55	483.17277		
50	49	483.42679	50	484.38236	51	485.34544	52	486.3085	53	487.27224	54	488.23536	55	489.20851	56	490.17277		
50	50	490.42679	51	491.38236	52	492.34544	53	493.3085	54	494.27224	55	495.23536	56	496.20851	57	497.17277		
50	51	497.42679	52	498.38236	53	499.34544	54	500.3085	55	501.27224	56	502.23536	57	503.20851	58	504.17277		
50	52	504.42679	53	505.38236	54	506.34544	55	507.3085	56	508.27224	57	509.23536	58	510.20851	59	511.17277		
50	53	511.42679	54	512.38236	55	513.34544	56	514.3085	57	515.27224	58	516.23536	59	517.20851	60	518.17277		
50	54	518.42679	55	519.38236	56	520.34544	57	521.3085	58	522.27224	59	523.23536	60	524.20851	61	525.17277		
50	55	525.42679	56	526.38236	57	527.34544	58	528.3085	59	529.27224	60	530.23536	61	531.20851	62	532.17277		
50	56	532.42679	57	533.38236	58	534.34544	59	535.3085	60	536.27224	61	537.23536	62	538.20851	63	539.17277		
50	57	539.42679	58	540.38236	59	541.34544	60	542.3085	61	543.27224	62	544.23536	63	545.20851	64	546.17277		
50	58	546.42679	59	547.38236	60	548.34544	61	549.3085	62	550.27224	63	551.23536	64	552.20851	65	553.17277		
50	59	553.42679	60	554.38236	61	555.34544	62	556.3085	63	557.27224	64	558.23536	65	559.20851	66	560.17277		
50	60	560.42679	61	561.38236	62	562.34544	63	563.3085	64	564.27224	65	565.23536	66	566.20851	67	567.17277		
50	61	567.42679	62	568.38236	63	569.34544	64	570.3085	65	571.27224	66	572.23536	67	573.20851	68	574.17277		
50	62	574.42679	63	575.38236	64	576.34544	65	577.3085	66	578.27224	67	579.23536	68	580.20851	69	581.17277		
50	63	581.42679	64	582.38236	65	583.34544	66	584.3085	67	585.27224	68	586.23536	69	587.20851	70	588.17277		
50	64	588.42679	65	589.38236	66	590.34544	67	591.3085	68	592.27224	69	593.23536	70	594.20851	71	595.17277		
50	65	595.42679	66	596.38236	67	597.34544	68	598.3085	69	599.27224	70	600.23536	71	601.20851	72	602.17277		
50	66	602.42679	67	603.38236	68	604.34544	69	605.3085	70	606.27224	71	607.23536	72	608.20851	73	609.17277		
5																		

# VOLUME—CUBIC METERS TO CUBIC YARDS

[Reduction factor: 1 cubic meter = 1.307942772 cubic yards]

Cubic meters yards	Cubic yards	Cubic meters	Cubic yards											
0	100	130.79428	200	261.58855	300	392.38283	400	523.1771	500	653.97139	600	784.76566	700	915.5994
1	1.30794	132.10222	2	262.86530	1	393.6907	1	500.653	1	655.27933	1	784.69761	1	900.1046
2	2.61589	2.133.41016	2	264.20444	2	394.99872	2	525.79299	2	656.58727	2	787.38155	2	916.80778
3	3.92383	3.134.71811	3	265.51238	3	396.30666	3	567.10094	3	657.89521	3	788.68943	3	919.48377
4	5.23177	4.136.02605	4	266.82033	4	397.61460	4	528.40888	4	659.20316	4	789.94743	4	920.58899
5	6.53971	5.137.33399	5	268.12827	5	398.32525	5	529.71682	5	660.51110	5	791.30538	5	922.09665
6	7.84766	6.138.61933	6	269.43621	6	400.02434	6	531.02477	6	661.81904	6	792.40760	6	923.40758
7	9.15650	7.139.94988	7	270.74415	7	401.53843	7	663.12699	7	663.23271	7	793.92126	7	924.71554
8	10.46354	8.141.25782	8	270.20310	9	402.14543	8	664.6065	9	664.33493	8	795.28291	8	925.03345
9	11.77117	9.142.56576	9	273.36024	9	534.94859	9	665.72087	9	666.53715	9	927.33145	9	928.15270
10	13.07943	11.143.87370	10	274.66798	310	405.46226	410	536.26654	510	667.05081	610	797.84509	710	928.63937
11	14.38737	11.145.18165	11	275.97592	1	406.77020	1	537.56448	1	668.46670	1	799.53033	1	929.94731
12	15.69531	12.146.48959	12	278.28887	2	408.07814	2	538.78742	2	669.66740	2	800.46698	2	930.25525
13	17.00326	13.147.79753	13	278.59181	3	409.38606	3	540.18036	3	670.97464	3	801.76892	3	932.56320
14	18.31120	14.149.10548	14	279.89975	4	410.69403	4	541.48831	4	672.28258	4	803.07866	4	933.87114
15	19.61914	15.150.41342	15	281.20770	5	412.00197	5	542.79625	5	673.59033	5	804.38890	5	935.17908
16	20.92078	16.151.72136	16	282.51564	6	413.30992	6	544.10419	6	674.89847	6	805.69270	6	936.48702
17	22.23503	17.153.02935	17	283.82358	7	414.61786	7	545.41218	7	675.20641	7	807.00669	7	937.79497
18	23.54927	18.154.33725	18	285.13152	8	415.52880	8	546.72008	8	677.51436	8	808.30863	8	939.10291
19	24.85091	19.155.64519	19	286.43947	9	417.23374	9	548.02802	9	678.82230	9	809.61658	9	940.41085
20	26.15886	20.156.95313	220	287.74741	320	418.54619	420	549.33596	520	680.13224	620	810.93452	720	941.71880
21	27.46686	21.158.26108	21	289.05535	1	419.89633	1	550.64391	1	681.48181	1	812.32456	1	942.02674
22	28.77474	22.159.56902	2	290.36330	2	421.15757	2	551.95185	2	682.74613	2	813.54040	2	944.33468
23	30.08268	3.160.87696	3	291.67124	3	422.46552	3	554.56774	3	684.05407	3	814.84335	3	945.64262
24	31.39063	4.162.18490	4	292.97918	4	423.77346	4	554.77346	4	685.36201	4	816.15265	4	946.95057
25	32.69857	5.163.49285	5	294.28712	5	425.08140	5	555.87568	5	686.66996	5	817.46423	5	948.28581
26	34.01651	6.164.80079	6	295.55057	6	426.38934	6	556.18362	6	687.97790	6	818.77218	6	949.56445
27	35.31445	7.166.10873	7	296.30801	7	427.69729	7	558.49156	7	689.28584	7	820.08012	7	950.87440
28	36.62240	8.167.41667	8	298.21095	9	429.05253	9	559.79951	8	690.59378	8	821.38806	8	952.12324
29	37.93034	9.168.72462	9	299.51889	9	430.31317	9	561.10745	9	691.90173	9	822.69900	9	953.49028
30	39.23828	13.170.03256	220	300.82684	320	431.62111	420	562.41539	520	693.20967	620	824.03935	730	954.78222
31	40.54623	1.171.34950	1	302.13478	1	432.29206	1	563.72333	1	694.51761	1	825.31189	1	956.10617
32	41.85417	2.172.64815	2	303.44272	2	434.23470	2	565.03128	2	695.82555	2	827.92777	2	957.41411
33	43.16211	3.173.75067	3	304.75067	3	435.33922	3	566.34944	3	697.13350	3	828.52427	3	958.72205
34	44.47005	4.175.26433	4	305.05861	4	436.65289	4	567.64716	4	698.44144	4	829.23572	4	960.03999
35	45.77800	5.176.57227	5	307.36655	5	438.16083	5	568.95511	5	699.74938	5	830.54366	5	961.33704
36	47.08594	6.177.88922	6	308.67449	6	439.46777	6	570.26303	6	701.05733	6	831.81560	6	962.64588
37	48.39388	7.179.18816	7	309.98244	8	440.77667	7	571.57099	7	702.36527	8	833.15955	7	963.9382
38	49.70183	8.180.49610	8	311.29038	8	442.08466	8	572.87893	8	703.67321	8	834.46749	8	965.26177
39	51.00977	9.181.80405	9	312.59832	9	443.39260	9	574.18688	9	704.98115	9	835.75743	9	966.56971
40	140	183.37171	240	315.90627	340	444.70054	440	575.49482	540	706.28910	640	837.08337	740	967.87765
41	53.62565	1.184.41993	1	316.21421	1	446.00894	1	576.80276	1	707.39704	1	838.39132	1	969.15597
42	54.93365	2.185.72787	2	316.52215	2	447.31643	2	577.51628	2	708.70049	2	839.08226	2	970.49354
43	56.24154	3.187.03562	3	317.83037	3	448.62437	3	578.82555	3	710.21293	3	840.07020	3	971.80148
44	57.54948	4.188.34376	4	319.13804	4	449.93243	4	579.02877	4	711.52087	4	842.31515	4	972.30243
45	58.85742	5.189.65170	5	320.44598	5	451.24026	5	582.03453	5	712.82881	5	843.62309	5	974.41737
46	60.16537	6.190.95064	6	321.75302	6	452.34802	6	583.32448	6	714.13675	6	844.93103	6	975.52531
47	61.47331	7.192.26579	7	323.06186	7	453.65042	7	584.65042	7	715.44470	7	846.33897	7	977.03325
48	62.78125	8.193.57553	8	324.36981	8	455.16408	8	585.98336	8	716.75264	8	847.54692	8	978.34119
49	64.08920	9.194.88347	9	325.67775	9	456.47203	9	587.25630	9	718.06058	9	848.85456	9	979.69199

50	65, 39714	150	196, 19142	250	326, 98569	250	457, 77997	450	588, 57425	550	719, 36852	550	850, 95708	650	850, 1,111, 75136		
1	197, 49936	2	329, 29364	1	329, 60518	2	460, 39526	1	589, 57991	2	591, 19013	1	581, 47074	2	852, 77869	1	1,114, 36724
2	66, 70598	2	198, 80730	3	200, 11524	3	461, 01739	4	463, 01739	4	593, 00952	4	593, 00952	2	983, 57296	2	1,114, 36724
3	69, 32097	2	201, 42319	4	332, 21746	4	464, 31968	5	464, 31968	5	595, 11396	4	585, 39457	4	986, 18895	3	1,115, 67518
4	70, 62891	5	71, 93685	5	202, 73113	5	333, 52541	6	343, 58895	6	596, 62763	6	586, 70252	5	987, 49679	5	1,118, 29107
5	71, 24480	6	204, 03907	6	205, 34702	7	336, 14129	7	466, 93557	7	597, 721618	6	589, 80146	6	988, 80474	6	1,119, 59909
6	72, 55274	7	74, 55274	7	206, 65496	8	337, 44924	8	469, 24351	8	599, 03379	7	597, 31840	7	990, 11268	7	1,122, 21490
7	75, 86668	8	75, 86668	9	207, 96290	9	338, 75718	9	469, 55146	9	600, 93429	9	860, 66234	8	991, 42662	8	1,123, 00918
8	77, 16862	9	77, 16862	9	207, 96290	9	338, 75718	9	469, 55146	9	600, 93429	9	860, 66234	9	991, 42662	9	1,123, 00918
60	78, 47637	160	209, 27084	260	340, 06512	360	470, 85940	460	601, 65368	560	732, 44795	660	863, 24223	760	994, 03651	860	1,124, 83078
1	79, 78451	1	210, 57879	1	341, 37306	1	472, 16734	1	602, 16734	1	733, 75590	1	864, 55017	1	995, 34445	1	1,126, 13873
2	81, 09245	2	211, 88673	2	342, 68101	2	473, 15728	2	604, 26956	2	735, 06384	2	865, 28812	2	996, 65239	2	1,127, 44667
3	82, 40939	3	213, 19467	3	343, 98895	3	474, 73323	3	605, 57570	3	736, 37171	3	867, 16606	3	997, 96034	3	1,128, 75611
4	83, 70834	4	214, 50261	4	345, 26689	4	476, 09117	4	606, 38545	4	737, 67972	4	868, 47400	4	999, 26828	4	1,130, 06256
5	85, 01628	5	215, 81056	5	346, 60483	5	477, 39911	5	608, 19339	5	738, 98767	5	869, 71914	5	1,000, 57622	5	1,131, 37050
6	86, 37442	6	216, 11850	6	347, 91278	6	478, 70705	6	609, 50133	6	740, 29561	6	871, 09889	6	1,001, 88416	6	1,132, 67844
7	87, 63217	7	218, 42644	7	349, 22077	7	480, 01500	7	610, 80297	7	742, 11722	8	872, 37873	7	1,003, 19211	7	1,133, 67838
8	88, 94016	8	219, 73439	8	350, 32866	8	481, 32294	8	612, 11722	8	742, 91149	8	873, 77877	8	1,004, 50005	8	1,135, 29433
9	90, 24805	9	221, 04233	9	351, 83661	9	482, 63088	9	613, 42516	9	744, 21944	9	875, 01371	9	1,005, 80799	9	1,136, 60227
70	91, 55599	170	222, 35027	270	353, 14455	370	483, 93883	470	614, 73310	570	745, 52738	670	876, 32166	770	1,007, 11593	870	1,137, 91021
1	92, 86394	1	223, 65821	1	355, 45249	1	485, 24677	1	616, 04105	1	746, 33332	1	878, 97574	1	1,009, 42388	1	1,139, 21815
2	94, 17188	2	224, 96616	2	355, 76043	2	486, 55471	2	617, 04105	2	748, 14327	2	878, 97574	2	1,009, 73182	2	1,140, 52961
3	95, 47922	3	226, 27410	3	357, 06388	3	487, 86265	3	618, 65693	3	749, 45121	3	880, 25459	3	1,011, 03976	3	1,141, 83040
4	96, 78770	4	227, 58204	4	358, 37632	4	489, 17060	4	619, 96487	4	750, 57915	4	881, 53343	4	1,012, 34771	4	1,143, 19198
5	98, 09571	5	228, 88999	5	359, 68426	5	490, 47854	5	621, 27282	5	752, 06709	5	882, 86137	5	1,013, 65565	5	1,144, 44993
6	99, 40365	6	230, 19793	6	360, 99221	6	491, 76483	6	623, 58076	6	753, 37504	6	884, 16931	6	1,014, 96359	6	1,145, 52515
7	100, 71159	7	231, 50187	7	362, 30015	7	493, 09443	7	623, 88870	7	754, 68289	7	885, 47726	7	1,016, 27153	7	1,147, 06381
8	102, 01934	8	232, 60381	8	363, 60809	8	494, 40237	8	625, 19665	8	755, 99082	8	888, 75520	8	1,017, 57948	8	1,148, 37375
9	103, 22176	9	234, 12176	9	364, 91663	9	495, 71031	9	626, 50341	9	757, 29886	9	888, 00334	9	1,018, 88747	9	1,149, 68107
80	104, 63532	180	235, 42970	280	366, 22398	380	497, 01825	480	627, 81253	580	758, 60681	680	889, 40108	780	1,020, 19536	880	1,150, 98664
1	105, 94336	1	236, 73764	1	367, 53192	1	498, 32620	1	629, 12047	1	759, 91475	1	890, 70903	1	1,021, 50330	1	1,152, 29758
2	107, 55295	2	238, 04558	2	368, 83986	2	499, 63144	2	630, 42842	2	760, 22269	2	892, 01697	2	1,022, 81125	2	1,153, 60147
3	108, 55295	3	239, 35253	3	370, 14780	3	500, 94208	3	631, 73632	3	762, 53064	3	893, 33491	3	1,024, 11919	3	1,154, 91347
4	109, 86719	4	240, 66147	4	371, 45575	4	633, 04330	4	633, 45575	4	763, 83858	4	894, 63286	4	1,025, 42713	4	1,156, 22141
5	111, 17514	5	241, 98441	5	372, 76369	5	634, 35224	5	635, 14652	5	765, 94080	5	895, 74626	5	1,027, 52935	5	1,157, 32263
6	112, 45308	6	243, 27736	6	374, 66019	6	604, 86593	6	635, 45456	6	766, 11560	6	897, 28774	6	1,028, 40302	6	1,158, 83730
7	113, 79102	7	244, 58330	7	375, 37958	7	606, 17385	7	636, 96813	7	767, 62441	7	898, 55668	7	1,029, 35096	7	1,160, 14524
8	115, 09896	8	245, 89324	8	376, 68752	8	507, 48180	8	638, 22959	8	769, 07033	8	899, 86463	8	1,030, 56890	8	1,161, 45318
9	116, 40691	9	247, 20118	9	377, 99546	9	508, 78974	9	639, 58402	9	770, 37829	9	901, 17257	9	1,031, 96685	9	1,162, 76112
90	117, 71435	190	248, 50913	290	379, 30340	390	510, 00768	490	640, 80196	590	771, 68624	690	902, 48051	790	1,033, 27479	890	1,164, 06907
1	119, 02279	1	249, 81707	1	380, 61355	1	511, 40562	1	642, 19900	1	772, 99418	1	903, 58273	1	1,034, 58273	1	1,165, 37701
2	120, 33074	2	251, 12501	2	381, 91929	2	512, 71357	2	643, 70784	2	774, 30212	2	905, 06460	2	1,035, 89068	2	1,166, 68895
3	121, 63868	3	252, 43295	3	383, 22723	3	514, 02151	3	644, 81579	3	775, 61006	3	906, 40434	3	1,037, 19862	3	1,167, 99290
4	122, 94652	4	253, 74990	4	384, 53517	4	515, 32945	4	646, 12373	4	776, 91801	4	907, 71228	4	1,038, 50656	4	1,169, 30084
5	124, 25456	5	255, 04884	5	385, 84312	5	516, 63739	5	647, 43167	5	778, 22595	5	909, 02023	5	1,039, 81450	5	1,170, 60878
6	125, 36251	6	256, 35078	6	387, 15106	6	517, 94534	6	648, 19951	6	779, 53387	6	910, 38217	6	1,041, 12245	6	1,171, 91672
7	126, 87045	7	257, 66473	7	388, 45900	7	519, 25328	7	650, 04756	7	780, 84183	7	911, 66311	7	1,042, 43039	7	1,173, 24667
8	128, 17839	8	258, 97267	8	389, 76965	8	515, 35550	8	651, 26122	8	782, 14978	8	912, 94405	8	1,043, 73833	8	1,174, 53268
9	129, 48633	9	260, 28061	9	391, 07489	9	521, 86917	9	652, 66344	9	783, 45772	9	914, 25200	9	1,045, 04627	9	1,175, 84055

CAPACITY—LIQUID QUARTS TO LITERS

[Reduction factor: 1 liquid quart = 0.94633307 liter]

Liquid quarts	Liters																		
0	0.9463	100	94.633	200	189.267	300	283.900	400	378.533	500	473.167	600	567.800	700	662.433	800	757.066	900	851.700
1	0.9463	1	94.633	2	190.213	1	284.846	1	379.480	1	474.113	1	568.746	1	663.379	1	758.013	1	852.646
2	1.8927	2	196.526	2	191.159	2	285.793	2	380.426	2	475.059	2	569.693	2	664.326	2	758.959	2	853.592
3	2.8390	3	197.472	3	192.106	3	286.739	3	381.372	3	476.006	3	570.339	3	665.272	3	759.305	3	854.539
4	3.7853	4	98.419	4	193.052	4	287.665	4	382.319	4	476.952	4	571.385	4	666.218	4	760.852	4	855.485
5	4.7317	5	99.365	5	193.998	5	288.632	5	383.255	5	477.898	5	572.332	5	667.165	5	761.798	5	856.431
6	5.6780	6	100.311	6	194.945	6	289.578	6	384.211	6	478.845	6	573.478	6	668.111	6	762.744	6	857.371
7	6.6243	7	101.258	7	195.891	7	290.524	7	385.158	7	479.791	7	574.424	7	669.057	7	763.691	7	858.324
8	7.5707	8	102.204	8	196.837	8	291.471	8	386.104	8	480.737	8	575.371	8	670.004	8	764.587	8	859.270
9	8.5170	9	103.150	9	197.784	9	292.417	9	387.050	9	481.684	9	576.317	9	670.950	9	765.583	9	860.217
10	9.4633	10	104.097	10	198.730	10	293.363	10	387.997	10	482.630	10	577.263	10	671.896	10	766.530	10	861.163
11	10.4097	11	105.043	11	199.675	11	294.310	11	388.943	11	483.576	11	578.210	11	672.843	11	767.476	11	862.109
12	11.3560	12	106.989	12	200.623	12	295.256	12	389.890	12	484.523	12	579.156	12	673.780	12	768.422	12	863.056
13	12.3023	13	106.936	13	201.569	13	296.202	13	390.836	13	485.469	13	580.102	13	674.735	13	769.369	13	864.002
14	13.2487	14	107.882	14	202.515	14	297.149	14	391.782	14	486.415	14	581.149	14	675.682	14	770.315	14	864.948
15	14.1950	15	108.828	15	203.462	15	298.095	15	392.728	15	487.362	15	581.995	15	676.628	15	771.261	15	865.895
16	15.1413	16	109.775	16	204.408	16	299.041	16	393.675	16	488.308	16	582.941	16	677.574	16	772.208	16	866.841
17	16.0877	17	110.721	17	205.354	17	299.779	17	394.621	17	489.254	17	583.888	17	678.521	17	773.154	17	867.787
18	17.0340	18	111.667	18	206.301	18	300.934	18	395.567	18	490.201	18	584.834	18	679.467	18	774.100	18	868.734
19	17.9803	19	112.614	19	207.247	19	301.388	19	396.514	19	491.147	19	585.780	19	680.413	19	775.047	19	869.680
20	18.2677	20	113.560	20	208.193	20	302.827	20	398.460	20	492.093	20	586.727	20	681.360	20	776.993	20	870.626
21	19.8730	21	114.506	21	209.140	21	303.773	21	399.353	21	493.040	21	587.673	21	682.306	21	776.939	21	871.573
22	20.8193	22	115.453	22	210.086	22	304.719	22	399.353	22	493.986	22	588.119	22	683.252	22	777.886	22	872.519
23	21.7657	23	116.399	23	211.032	23	305.666	23	399.353	23	494.932	23	589.566	23	684.199	23	778.832	23	873.465
24	22.7120	24	117.345	24	211.979	24	306.612	24	401.245	24	495.879	24	590.512	24	685.145	24	779.778	24	874.412
25	23.6583	25	118.292	25	212.925	25	307.558	25	402.192	25	496.825	25	591.458	25	686.091	25	780.725	25	875.358
26	24.6047	26	119.238	26	213.871	26	308.505	26	403.138	26	497.771	26	592.405	26	687.038	26	781.671	26	876.304
27	25.5510	27	120.184	27	214.818	27	309.451	27	404.084	27	498.718	27	593.351	27	687.984	27	782.617	27	877.251
28	26.4973	28	121.131	28	215.764	28	310.397	28	405.031	28	499.664	28	594.297	28	688.930	28	787.197	28	878.150
29	27.4437	29	122.077	29	216.710	29	311.344	29	405.977	29	500.610	29	595.444	29	699.877	29	784.510	29	879.143
30	28.3900	30	123.023	30	217.657	30	312.290	30	406.923	30	501.557	30	596.190	30	690.823	30	785.456	30	880.090
31	29.3363	31	123.970	31	218.603	31	313.236	31	407.870	31	502.503	31	597.136	31	691.769	31	786.403	31	881.036
32	30.2827	32	124.916	32	219.549	32	314.183	32	408.816	32	503.449	32	598.083	32	692.716	32	787.349	32	881.982
33	31.2290	33	125.862	33	220.496	33	315.129	33	409.762	33	504.396	33	599.129	33	693.662	33	788.205	33	882.929
34	32.1753	34	126.809	34	221.442	34	316.075	34	410.709	34	505.342	34	599.175	34	694.608	34	789.242	34	883.875
35	33.1217	35	127.755	35	222.388	35	317.022	35	411.655	35	506.288	35	600.922	35	695.555	35	790.188	35	884.821
36	34.0680	36	128.701	36	223.335	36	317.968	36	412.601	36	507.235	36	601.868	36	696.501	36	791.134	36	885.768
37	35.0143	37	129.648	37	224.281	37	318.914	37	413.548	37	508.181	37	602.814	37	697.447	37	792.081	37	886.714
38	35.9607	38	130.594	38	225.227	38	319.861	38	414.494	38	509.127	38	603.761	38	698.394	38	793.027	38	887.660
39	36.9070	39	131.540	39	226.174	39	320.807	39	415.440	39	510.074	39	604.707	39	699.340	39	793.973	39	888.607
40	37.8533	40	132.487	40	227.120	40	340	40	416.387	40	540	40	605.653	40	740	40	794.920	40	889.553
41	38.7997	41	133.433	41	228.066	41	322.700	41	417.333	41	541.966	41	606.599	41	701.233	41	795.866	41	890.499
42	39.7460	42	134.379	42	229.013	42	323.646	42	418.279	42	542.913	42	607.346	42	702.179	42	796.812	42	891.446
43	40.6923	43	135.326	43	229.959	43	324.592	43	419.226	43	543.859	43	608.192	43	703.125	43	797.759	43	892.392
44	41.6387	44	136.272	44	230.905	44	325.539	44	420.172	44	544.805	44	609.338	44	704.072	44	798.705	44	893.358
45	42.5850	45	137.218	45	231.852	45	326.485	45	421.118	45	545.806	45	610.752	45	705.018	45	799.151	45	894.285
46	43.5313	46	138.165	46	232.431	46	327.438	46	422.063	46	546.806	46	616.698	46	706.964	46	800.598	46	895.231
47	44.4777	47	139.111	47	233.744	47	328.378	47	423.011	47	547.807	47	617.644	47	712.277	47	801.544	47	896.177
48	45.4240	48	140.057	48	234.691	48	329.324	48	424.957	48	548.807	48	618.591	48	713.224	48	802.857	48	897.124
49	46.3703	49	141.004	49	240	49	330.270	49	425.807	49	550	49	620.705	49	714.000	49	803.437	49	898.070

50	47.3167	150	141.950	250	236.583	350	331.217	450	425.850	550	520.483	650	615.116	750	709.750	850	804.383	950	899.966
1	48.2630	1	142.896	1	237.330	1	332.163	1	426.796	1	521.330	1	616.063	1	710.696	1	805.329	1	899.963
2	49.2093	2	143.843	2	238.476	2	333.109	2	427.743	2	522.376	2	617.009	2	711.642	2	807.227	2	900.909
3	50.1557	3	144.780	3	239.422	3	334.056	3	428.689	3	523.322	3	617.955	3	712.589	3	807.222	3	901.855
4	51.1020	4	145.735	4	240.369	4	335.002	4	429.635	4	524.269	4	618.902	4	713.535	4	808.168	4	902.802
5	52.0483	5	146.682	5	241.361	5	335.948	5	430.582	5	525.215	5	619.88	5	714.481	5	809.115	5	903.748
6	52.9947	6	147.628	6	242.361	6	336.895	6	431.528	6	526.161	6	620.794	6	715.428	6	810.061	6	904.694
7	53.9410	7	148.574	7	243.208	7	337.841	7	432.474	7	527.108	7	621.741	7	716.374	7	811.007	7	905.641
8	54.8873	8	149.521	8	244.154	8	338.787	8	433.421	8	528.054	8	621.730	8	717.320	8	806.587	8	906.587
9	55.8337	9	150.467	9	245.100	9	339.734	9	434.367	9	529.000	9	623.633	9	718.267	9	812.900	9	907.533
60	56.7800	160	151.413	260	246.047	360	340.680	460	435.313	560	529.047	660	624.580	760	719.213	860	813.846	960	908.480
70	67.1869	170	160.874	270	255.510	370	350.143	470	444.777	570	539.410	670	634.043	770	728.676	870	823.310	970	917.943
80	75.7066	180	170.340	280	264.973	380	359.607	480	454.240	580	548.873	680	643.506	780	738.140	880	832.773	980	927.406
90	85.1700	190	179.803	290	274.437	390	369.070	490	463.703	590	558.337	690	652.970	790	747.603	890	842.236	990	936.870
100	95.1163	200	180.750	300	284.176	400	383.406	500	483.730	600	583.337	700	683.966	800	784.129	900	843.183	1000	937.816
110	105.0626	210	181.696	310	294.226	410	393.666	510	493.996	610	593.337	710	694.442	810	795.075	910	844.129	1010	938.762
120	115.0090	220	182.642	320	304.276	420	393.909	520	494.442	620	594.337	720	695.442	820	795.709	920	845.075	1020	939.709
130	125.9533	230	183.588	330	314.326	430	394.152	530	495.489	630	595.337	730	696.388	830	796.022	930	846.022	1030	940.655
140	135.9016	240	184.535	340	324.376	440	394.376	540	496.025	640	596.068	740	697.01	840	797.335	940	847.668	1040	941.601
150	145.8480	250	185.481	350	334.426	450	394.596	550	496.657	650	596.688	750	697.381	850	798.061	950	848.548	1050	942.548
160	155.7863	260	186.426	360	344.476	460	395.026	560	497.076	660	597.007	760	698.007	860	798.861	960	849.440	1060	943.494
170	165.7236	270	187.374	370	354.526	470	395.476	570	497.476	670	597.476	770	699.476	870	799.861	970	849.440	1070	943.494
180	175.6723	280	188.320	380	364.576	480	395.916	580	498.337	680	598.337	780	699.337	880	800.007	980	849.440	1080	944.440
190	185.6200	290	189.267	390	374.626	490	396.376	590	499.730	690	599.730	790	700.730	890	800.730	990	849.387	1090	945.387

CAPACITY—LITERS TO LIQUID QUARTS

[Reduction factor: 1 liter = 1.0567104 quarts]

Liters	Liquid quarts												
0	105.671	200	211.342	300	317.013	400	422.684	500	528.355	600	634.026	700	739.697
1	106.728	1	118.359	2	213.456	3	424.749	1	529.412	2	635.083	1	740.754
2	111.134	2	212.157	3	319.127	4	424.397	2	530.169	3	636.140	2	741.811
3	108.841	3	214.569	4	320.183	5	425.834	3	531.525	4	637.196	3	742.867
4	217.010	4	215.569	5	321.426	6	426.911	4	532.582	5	638.253	4	743.924
5	109.898	4	215.569	6	321.626	5	427.968	5	533.639	6	639.310	5	744.981
6	5.2836	5	110.955	6	217.682	7	323.353	6	429.024	7	534.695	6	640.367
7	3.4303	6	112.011	7	218.739	8	324.410	7	430.081	7	535.752	7	641.423
8	7.3970	7	113.068	8	219.796	9	325.457	8	431.138	8	536.809	8	642.480
9	8.4537	8	114.125	9	220.852	9	326.524	9	432.195	9	537.866	9	643.537
10	10.5671	110	116.238	210	221.909	310	327.580	410	433.251	510	538.922	610	644.593
1	11.6238	1	117.295	1	222.966	1	328.637	1	434.308	1	539.779	1	645.650
2	12.6805	2	118.352	2	224.023	2	329.694	2	435.365	2	540.036	2	646.707
3	13.7372	3	119.408	3	225.079	3	330.750	3	436.421	3	542.092	3	647.763
4	14.7939	4	120.465	4	226.136	4	331.807	4	437.478	4	543.149	4	648.820
5	15.8507	5	121.522	5	227.193	5	332.864	5	438.535	5	544.206	5	649.877
6	16.9074	6	122.578	6	228.249	6	333.920	6	439.592	6	545.263	6	650.934
7	17.9641	7	123.635	7	229.306	7	334.977	7	440.648	7	546.319	7	651.990
8	18.0208	8	124.692	8	230.363	8	336.034	8	441.705	8	547.376	8	652.046
9	20.0775	9	125.749	9	231.420	9	337.091	9	442.762	9	548.433	9	654.104
20	21.1342	120	126.805	220	232.476	320	338.147	420	443.818	520	549.489	620	655.160
1	22.1909	1	127.862	1	233.533	1	339.204	1	447.875	1	550.546	1	666.217
2	23.2467	2	128.919	2	234.590	2	340.261	2	448.932	2	551.603	2	667.274
3	24.3043	3	129.975	3	235.646	3	341.317	3	449.988	3	552.660	3	668.331
4	25.3610	4	131.032	4	236.703	4	342.374	4	448.045	4	553.716	4	669.387
5	26.4178	5	132.089	5	237.760	5	343.431	5	449.102	5	554.773	5	670.444
6	27.4745	6	133.146	6	238.817	6	344.488	6	450.159	6	555.830	6	671.501
7	28.5312	7	134.204	7	239.873	7	345.544	7	451.215	7	556.886	7	672.557
8	29.5879	8	135.259	8	240.930	9	346.601	8	452.272	8	557.943	8	673.614
9	30.6446	9	136.316	9	241.987	9	347.658	9	453.329	9	559.000	9	664.671
20	31.7013	130	137.372	230	243.043	330	348.714	430	454.385	530	560.057	630	665.728
1	32.7580	1	138.429	1	244.100	1	349.771	1	455.442	1	561.113	1	666.844
2	33.8147	2	139.486	2	245.157	2	350.828	2	456.499	2	562.170	2	667.841
3	34.8714	3	140.542	3	246.214	3	351.885	3	457.556	3	563.227	3	668.898
4	35.9282	4	141.599	4	247.270	4	352.941	4	458.612	4	564.283	4	669.954
5	36.9849	5	142.656	5	248.327	5	353.998	5	459.669	5	565.340	5	671.011
6	38.0416	6	143.713	6	249.384	6	355.055	6	460.726	6	566.397	6	672.068
7	39.0983	7	144.769	7	250.440	7	356.111	7	461.782	7	567.453	7	673.125
8	40.1550	8	145.826	8	251.497	8	357.168	8	462.839	8	568.510	8	674.181
9	41.2117	9	146.883	9	252.554	9	358.225	9	463.896	9	569.567	9	675.236
20	42.2684	140	147.939	240	253.610	340	359.282	440	464.953	540	570.624	640	676.295
1	43.3251	1	148.996	1	254.667	1	360.338	1	466.009	1	571.680	1	677.328
2	44.3818	2	150.053	2	255.724	2	361.395	2	467.066	2	572.737	2	678.408
3	45.4385	3	151.110	3	256.781	3	362.452	3	468.123	3	573.794	3	679.465
4	46.4953	4	152.166	4	257.837	4	363.508	4	469.187	4	574.850	4	680.521
5	47.5520	5	153.223	5	258.894	5	364.565	5	470.236	5	575.907	5	681.578
6	48.6087	6	154.280	6	259.951	6	365.622	6	471.293	6	576.964	6	682.635
7	49.6654	7	155.336	7	261.007	7	366.679	7	472.350	7	578.021	7	683.706
8	50.7221	8	156.393	8	262.064	8	367.735	8	473.406	8	579.077	8	684.748
9	51.7788	9	157.450	9	263.121	9	368.792	9	474.463	9	580.134	9	685.805

52	8352	150	158.507	450	475.520	550	581.191	650	686.862	750	792.533	850	898.204	950	1.003.875
1	33.4839	1	159.563	1	370.905	1	476.576	1	582.247	1	687.918	1	899.261	1	1.004.932
2	265.234	2	160.620	2	371.962	2	477.633	2	583.304	2	688.975	2	895.390	2	1.005.988
3	36.677	3	161.677	3	267.348	3	478.690	3	584.361	3	689.032	3	901.374	3	1.007.045
4	37.0057	4	162.733	4	268.404	4	479.747	4	585.418	4	691.089	4	902.431	4	1.008.102
5	56.361	5	163.790	5	269.461	5	480.803	5	586.474	5	692.145	5	903.487	5	1.009.158
6	58.1191	6	164.847	6	270.518	6	486.860	6	587.531	6	693.202	6	798.873	6	1.010.215
7	60.2325	7	165.104	7	271.575	7	482.917	7	588.588	7	694.259	7	799.930	7	1.011.272
8	61.3892	8	166.960	8	272.631	8	483.973	8	589.644	8	695.315	8	800.986	8	1.012.329
9	62.3459	9	168.017	9	273.688	9	485.030	9	590.701	9	696.372	9	802.043	9	1.013.385
60	63.4026	160	169.074	260	274.745	360	380.416	460	486.087	560	591.758	660	697.429	760	803.100
1	64.4593	1	170.130	1	275.801	1	381.472	1	487.143	1	593.271	1	698.486	1	804.549
2	65.5160	2	171.187	2	276.858	2	382.529	2	488.200	2	594.542	2	699.555	2	805.613
3	66.5728	3	172.244	3	277.915	3	383.586	3	489.257	3	594.628	3	700.599	3	806.720
4	67.6295	4	173.301	4	278.972	4	384.643	4	490.314	4	595.695	4	701.656	4	807.327
5	68.6862	5	174.357	5	280.028	5	385.699	5	491.370	5	597.041	5	702.712	5	808.383
6	69.7429	6	175.414	6	281.085	6	386.756	6	492.427	6	598.098	6	703.769	6	809.440
7	70.7996	7	176.471	7	282.142	7	387.813	7	493.484	7	599.155	7	704.826	7	810.497
8	71.8563	8	177.527	8	283.198	8	388.869	8	494.540	8	600.212	8	705.883	8	811.554
9	72.9130	9	178.584	9	284.255	9	389.926	9	495.597	9	601.268	9	706.939	9	812.610
70	73.9697	170	179.641	270	285.312	370	390.983	470	496.654	570	602.325	670	707.996	770	819.338
1	75.0264	1	180.697	1	286.369	1	392.032	1	497.711	1	603.332	1	709.053	1	820.395
2	76.0831	2	181.754	2	287.425	2	393.096	2	498.767	2	604.338	2	710.109	2	815.780
3	78.1399	3	182.811	3	288.482	3	394.153	3	499.824	3	605.395	3	711.166	3	816.897
4	78.1966	4	183.868	4	289.539	4	395.210	4	500.881	4	606.552	4	712.223	4	817.994
5	79.2533	5	184.924	5	290.595	5	396.266	5	501.937	5	607.608	5	713.280	5	818.951
6	80.3100	6	185.981	6	291.652	6	397.323	6	502.984	6	608.665	6	714.336	6	820.007
7	81.3667	7	187.038	7	292.709	7	398.380	7	504.051	7	609.722	7	715.393	7	821.064
8	82.4234	8	188.094	8	293.765	8	399.437	8	505.108	8	610.779	8	716.450	8	822.121
9	83.4801	9	189.151	9	294.822	9	400.493	9	506.164	9	611.835	9	717.506	9	823.177
80	84.5368	180	190.208	280	295.879	380	401.550	480	507.221	580	612.892	680	718.563	780	824.234
1	85.5935	1	191.265	1	296.936	1	402.607	1	508.228	1	613.949	1	719.620	1	825.368
2	86.6503	2	192.321	2	297.992	2	509.334	2	615.005	2	720.676	2	726.727	2	830.494
3	87.7070	3	193.378	3	300.449	3	404.766	3	510.391	3	616.062	3	721.733	3	827.494
4	88.7637	4	194.435	4	301.106	4	511.448	4	617.119	4	722.498	4	828.491	4	934.132
5	89.8204	5	195.491	5	301.162	5	406.834	5	512.508	5	618.176	5	723.847	5	829.518
6	90.8771	6	196.548	6	302.219	6	407.890	6	513.561	6	619.232	6	724.903	6	830.574
7	91.9338	7	197.605	7	303.276	7	408.947	7	514.618	7	620.289	7	725.960	7	831.631
8	92.9905	8	198.662	8	304.333	8	409.004	8	515.675	8	621.346	8	727.017	8	832.688
9	94.0472	9	199.718	9	305.389	9	411.060	9	516.731	9	622.402	9	728.073	9	833.745
90	95.1039	190	200.775	290	205.879	390	206.446	490	412.117	590	517.788	690	729.130	790	834.801
1	96.1606	1	201.832	1	307.503	1	413.174	1	518.845	1	624.516	1	730.187	1	835.838
2	97.2174	2	202.888	2	308.559	2	414.230	2	519.902	2	625.573	2	731.244	2	836.915
3	98.2741	3	203.945	3	309.616	3	415.287	3	520.958	3	626.629	3	732.300	3	837.971
4	99.3308	4	205.002	4	310.673	4	416.344	4	522.015	4	627.686	4	733.357	4	839.028
5	100.3875	5	206.059	5	311.730	5	417.401	5	523.072	5	628.743	5	734.414	5	840.085
6	101.4442	6	207.115	6	312.796	6	418.457	6	524.128	6	629.799	6	735.470	6	841.141
7	102.5009	7	208.172	7	313.833	7	419.514	7	525.185	7	630.856	7	736.527	7	842.198
8	103.5676	8	209.129	8	314.900	8	420.571	8	526.242	8	631.913	8	737.584	8	843.256
9	104.6143	9	210.285	9	315.956	9	421.571	9	527.298	9	632.970	9	738.641	9	844.312

CAPACITY—GALLONS TO LITERS

[Reduction factor: 1 gallon = 3.785333 liters]

48

Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters				
0	0	100	378.333	200	757.066	300	1,135.600	400	1,514.133	500	1,892.666	600	2,271.199	700	2,649.733	800	3,028.256	900	3,406.799
1	3.7853	1	382.319	2	760.852	1	1,139.385	2	1,517.918	1	1,896.451	2	2,274.985	1	2,653.518	1	3,032.051	1	3,410.584
2	7.5707	2	386.104	3	764.637	2	1,143.170	3	1,521.704	2	1,900.237	3	2,287.770	2	2,657.303	2	3,035.837	2	3,414.370
3	11.3560	3	389.889	4	768.422	3	1,146.956	3	1,525.489	3	1,904.022	3	2,282.555	3	2,661.089	3	3,039.622	3	3,418.155
4	15.1413	4	393.675	4	772.208	4	1,150.744	4	1,529.274	4	1,907.807	4	2,286.341	4	2,664.874	4	3,043.407	4	3,421.940
5	18.9267	5	397.460	5	775.993	5	1,154.526	5	1,533.060	5	1,911.593	5	2,290.126	5	2,668.659	5	3,047.193	5	3,425.726
6	22.7120	6	401.245	6	779.778	6	1,158.312	6	1,536.845	6	1,915.378	6	2,293.911	6	2,672.445	6	3,050.978	6	3,429.511
7	26.4973	7	405.031	7	783.564	7	1,162.097	7	1,540.630	7	1,919.163	7	2,297.697	7	2,676.230	7	3,054.763	7	3,433.296
8	30.2827	8	408.816	8	787.349	8	1,165.882	8	1,544.416	8	1,922.949	8	2,301.482	8	2,680.015	8	3,058.548	8	3,437.082
9	34.0680	9	412.601	9	791.134	9	1,169.668	9	1,548.201	9	1,926.734	9	2,305.267	9	2,683.801	9	3,062.334	9	3,440.867
10	37.8533	10	416.387	210	794.920	310	1,173.453	410	1,551.986	510	1,930.519	610	2,309.053	710	2,687.586	810	3,066.119	910	3,444.652
1	41.6387	1	420.172	1	798.705	1	1,177.238	1	1,556.772	1	1,934.305	1	2,312.838	1	2,691.371	1	3,048.438	1	3,448.438
2	45.4240	2	423.057	2	802.490	2	1,181.024	2	1,559.557	2	1,938.090	2	2,316.823	2	2,695.157	2	3,045.223	2	3,452.223
3	49.2093	3	427.743	3	806.276	3	1,184.809	3	1,563.342	3	1,941.875	3	2,320.499	3	2,698.942	3	3,047.475	3	3,456.008
4	52.9947	4	431.528	4	810.061	4	1,188.594	4	1,567.128	4	1,945.661	4	2,324.194	4	2,702.277	4	3,081.260	4	3,459.794
5	56.7800	5	435.313	5	813.846	5	1,192.380	5	1,570.913	5	1,949.446	5	2,327.979	5	2,706.513	5	3,085.046	5	3,463.364
6	60.5653	6	439.099	6	817.632	6	1,196.165	6	1,574.698	6	1,953.231	6	2,331.765	6	2,710.298	6	3,088.831	6	3,467.364
7	64.3566	7	442.884	7	821.417	7	1,199.950	7	1,578.484	7	1,957.017	7	2,335.550	7	2,714.083	7	3,092.616	7	3,471.150
8	68.1360	8	446.669	8	825.202	8	1,203.736	8	1,582.269	8	1,960.802	8	2,339.335	8	2,717.869	8	3,096.402	8	3,474.935
9	71.9213	9	450.455	9	826.988	9	1,207.521	9	1,586.054	9	1,964.587	9	2,343.121	9	2,717.654	9	3,100.187	9	3,478.720
20	75.7066	120	454.240	220	832.773	320	1,215.306	420	1,589.840	520	1,968.373	620	2,346.906	720	2,725.439	820	3,103.972	920	3,482.506
1	75.4920	1	458.025	1	836.558	1	1,215.092	1	1,593.625	1	1,972.158	1	2,350.691	1	2,729.439	1	3,107.758	1	3,486.291
2	83.2773	2	461.811	2	840.344	2	1,218.877	2	1,597.410	2	1,975.943	2	2,354.477	2	2,733.010	2	3,111.543	2	3,490.076
3	87.0626	3	465.596	3	844.120	3	1,222.662	3	1,601.196	3	1,979.729	3	2,358.262	3	2,736.795	3	3,115.328	3	3,493.862
4	90.8480	4	469.381	4	847.914	4	1,226.448	4	1,604.981	4	1,983.514	4	2,362.047	4	2,740.581	4	3,119.114	4	3,497.647
5	94.6333	5	473.167	5	851.700	5	1,230.233	5	1,608.766	5	1,987.299	5	2,365.833	5	2,744.366	5	3,122.889	5	3,501.432
6	98.4186	6	476.952	6	855.485	6	1,234.018	6	1,612.552	6	1,991.085	6	2,369.618	6	2,748.151	6	3,126.684	6	3,505.218
7	102.2040	7	480.737	7	859.270	7	1,237.804	7	1,616.337	7	1,994.870	7	2,373.403	7	2,751.937	7	3,130.470	7	3,507.093
8	105.9893	8	484.523	8	863.056	8	1,241.589	8	1,620.122	8	1,998.655	8	2,377.089	8	2,755.722	8	3,134.255	8	3,512.788
9	109.7746	9	488.308	9	866.841	9	1,245.374	9	1,623.908	9	2,002.441	9	2,380.074	9	2,759.507	9	3,138.040	9	3,516.574
30	113.5600	130	492.093	230	870.626	330	1,249.160	430	1,627.693	530	2,006.226	630	2,384.759	730	2,763.293	830	3,141.826	930	3,520.359
1	117.3433	1	495.879	1	874.417	1	1,252.945	1	1,631.478	1	2,010.011	1	2,388.545	1	2,767.078	1	3,145.611	1	3,524.144
2	121.1366	2	499.664	2	878.197	2	1,256.730	2	1,635.264	2	2,013.797	2	2,392.330	2	2,770.863	2	3,149.396	2	3,527.440
3	124.9100	3	503.449	3	881.982	3	1,260.516	3	1,639.049	3	2,017.582	3	2,396.115	3	2,774.649	3	3,153.182	3	3,531.715
4	128.7013	4	507.235	4	885.768	4	1,264.304	4	1,642.834	4	2,021.367	4	2,399.901	4	2,778.434	4	3,156.967	4	3,535.500
5	132.4866	5	511.020	5	889.553	5	1,268.086	5	1,646.620	5	2,025.153	5	2,403.866	5	2,782.219	5	3,159.286	5	3,539.072
6	136.2720	6	514.805	6	893.338	6	1,271.872	6	1,650.405	6	2,028.938	6	2,407.471	6	2,786.005	6	3,164.538	6	3,543.071
7	140.0573	7	518.591	7	897.124	7	1,275.657	7	1,654.190	7	2,032.723	7	2,411.257	7	2,789.790	7	3,168.323	7	3,546.876
8	143.8426	8	522.376	8	900.909	8	1,279.442	8	1,657.976	8	2,036.509	8	2,415.042	8	2,793.573	8	3,172.108	8	3,550.642
9	147.6280	9	526.161	9	904.694	9	1,283.228	9	1,661.761	9	2,040.294	9	2,418.627	9	2,797.361	9	3,173.894	9	3,554.427
40	151.4133	140	529.947	240	908.428	340	1,287.013	440	1,665.546	540	2,044.079	640	2,422.613	740	2,801.146	840	3,179.679	940	3,558.212
1	155.1986	1	533.732	1	912.265	1	1,290.798	1	1,669.332	1	2,047.865	1	2,426.163	1	2,804.931	1	3,183.464	1	3,561.998
2	158.980	2	537.513	2	916.050	2	1,294.584	2	1,673.117	2	2,051.650	2	2,430.183	2	2,808.717	2	3,187.250	2	3,565.783
3	162.7693	3	541.303	3	919.836	3	1,298.369	3	1,676.902	3	2,055.435	3	2,433.969	3	2,812.502	3	3,191.635	3	3,569.568
4	166.5546	4	545.088	4	923.621	4	1,302.154	4	1,680.688	4	2,059.221	4	2,437.754	4	2,816.287	4	3,194.820	4	3,573.354
5	170.3400	5	548.873	5	927.406	5	1,305.940	5	1,684.940	5	2,063.006	5	2,441.339	5	2,820.073	5	3,198.606	5	3,577.139
6	174.1233	6	552.675	6	931.192	6	1,309.725	6	1,688.258	6	2,066.791	6	2,445.329	6	2,823.858	6	3,203.593	6	3,580.924
7	177.9106	7	556.444	7	934.977	7	1,313.510	7	1,692.044	7	2,070.577	7	2,449.110	7	2,827.643	7	3,206.176	7	3,584.710
8	181.6960	8	560.220	8	938.762	8	1,317.296	8	1,695.820	8	2,074.362	8	2,452.895	8	2,831.420	8	3,209.262	8	3,588.495
9	185.4813	9	564.015	9	942.548	9	1,321.081	9	1,699.614	9	2,078.147	9	2,456.881	9	2,835.214	9	3,213.747	9	3,592.280

50	189,266	567,800	1,324,866	450	1,703,400	550	2,081,933	650	2,460,466	750	2,838,999	850	3,217,532	950	3,596,066	
1	193,059	571,585	1,322,632	450	1,707,185	550	2,089,718	650	2,464,251	750	2,842,785	850	3,215,318	950	3,599,851	
2	196,837	575,371	1,332,437	450	1,710,970	550	2,089,503	650	2,468,037	750	2,846,570	850	3,225,103	950	3,603,336	
3	200,622	579,156	1,336,222	450	1,714,756	550	2,083,289	650	2,471,822	750	2,850,355	850	3,228,888	950	3,607,422	
4	204,407	582,941	1,340,008	450	1,718,541	550	2,087,074	650	2,475,107	750	2,854,141	850	3,232,674	950	3,611,207	
5	208,193	586,727	1,343,793	450	1,722,326	550	2,100,859	650	2,479,393	750	2,857,926	850	3,236,459	950	3,614,902	
6	211,978	590,512	1,347,578	450	1,726,112	550	2,104,645	650	2,483,178	750	2,861,711	850	3,240,244	950	3,618,778	
7	215,763	594,297	1,351,364	450	1,728,897	550	2,108,430	650	2,486,977	750	2,865,977	850	3,244,030	950	3,622,563	
8	219,549	598,083	1,355,149	450	1,733,682	550	2,112,215	650	2,490,799	750	2,869,282	850	3,247,815	950	3,626,348	
9	223,334	601,868	1,358,934	450	1,737,468	550	2,116,001	650	2,494,534	750	2,873,067	850	3,251,600	950	3,630,134	
60	227,119	605,653	240	984,186	360	1,366,525	460	1,745,253	560	2,119,786	660	2,498,320	760	2,876,853	860	3,253,386
1	230,905	609,438	1	987,972	360	1,365,038	460	1,745,338	560	2,123,571	660	2,502,315	760	2,880,638	860	3,259,171
2	234,690	613,224	2	991,757	370	1,370,290	470	1,748,824	570	2,127,357	670	2,505,800	770	2,884,423	870	3,262,956
3	238,479	617,009	3	995,542	370	1,374,076	470	1,752,009	570	2,131,142	670	2,509,675	770	2,888,209	870	3,266,742
4	242,261	620,794	4	999,328	370	1,377,861	470	1,756,394	570	2,134,227	670	2,513,461	770	2,891,994	870	3,270,527
5	246,046	624,580	5	1,003,113	380	1,381,646	470	1,760,180	570	2,138,713	670	2,517,246	770	2,895,775	870	3,274,312
6	249,819	628,365	6	1,006,898	380	1,385,432	470	1,763,965	570	2,142,498	670	2,521,031	770	2,899,565	870	3,278,998
7	253,617	632,150	7	1,010,684	380	1,389,217	470	1,767,750	570	2,146,283	670	2,524,817	770	2,903,350	870	3,281,883
8	257,402	635,936	8	1,014,469	380	1,393,002	470	1,771,536	570	2,150,069	670	2,528,602	770	2,907,135	870	3,285,668
9	261,187	639,721	9	1,018,254	380	1,396,788	470	1,775,321	570	2,153,854	670	2,532,387	770	2,910,921	870	3,289,454
70	264,973	643,506	270	1,022,040	370	1,400,573	470	1,779,106	570	2,157,639	670	2,536,173	770	2,914,706	870	3,293,239
1	268,738	647,292	1	1,025,325	370	1,404,358	470	1,782,892	570	2,161,425	670	2,543,743	770	2,918,993	870	3,297,024
2	272,543	651,077	2	1,029,610	370	1,408,144	470	1,786,677	570	2,165,210	670	2,547,529	770	2,922,277	870	3,297,343
3	276,329	654,862	3	1,033,396	370	1,411,929	470	1,790,462	570	2,168,995	670	2,551,314	770	2,926,062	870	3,298,595
4	280,114	658,648	4	1,037,181	370	1,415,714	470	1,794,248	570	2,172,781	670	2,555,099	770	2,930,847	870	3,299,194
5	283,899	662,433	5	1,040,966	370	1,419,500	470	1,798,033	570	2,176,566	670	2,558,885	770	2,933,633	870	3,312,166
6	287,685	666,218	6	1,044,752	370	1,423,285	470	1,801,818	570	2,180,351	670	2,562,650	770	2,937,418	870	3,315,951
7	291,470	670,004	7	1,047,570	370	1,427,070	470	1,805,504	570	2,184,137	670	2,566,455	770	2,941,203	870	3,319,336
8	295,255	673,789	8	1,052,322	370	1,430,856	470	1,809,389	570	2,187,922	670	2,566,455	770	2,944,899	870	3,323,522
9	299,041	677,574	9	1,056,108	370	1,434,641	470	1,813,174	570	2,191,107	670	2,570,241	770	2,948,774	870	3,327,307
80	302,826	681,360	280	1,059,893	380	1,438,226	480	1,816,960	580	2,195,493	680	2,574,026	780	2,952,056	880	3,331,092
1	306,619	685,145	1	1,063,634	380	1,442,212	480	1,820,745	580	2,199,278	680	2,577,811	780	2,956,345	880	3,339,626
2	309,397	688,930	2	1,067,464	380	1,445,987	480	1,824,530	580	2,203,063	680	2,581,597	780	2,960,130	880	3,344,878
3	314,182	692,716	3	1,071,249	380	1,449,782	480	1,828,316	580	2,206,849	680	2,585,382	780	2,963,915	880	3,342,446
4	317,967	696,501	4	1,075,034	380	1,453,568	480	1,832,101	580	2,210,634	680	2,589,167	780	2,967,701	880	3,346,234
5	321,753	700,286	5	1,078,820	380	1,457,353	480	1,835,886	580	2,214,419	680	2,592,953	780	2,971,486	880	3,351,019
6	325,538	704,072	6	1,082,605	380	1,461,138	480	1,839,671	580	2,218,205	680	2,596,738	780	2,975,271	880	3,353,804
7	329,323	707,857	7	1,086,390	380	1,464,924	480	1,843,457	580	2,221,990	680	2,600,523	780	2,979,057	880	3,357,590
8	333,109	711,642	8	1,090,176	380	1,468,799	480	1,847,242	580	2,225,775	680	2,604,309	780	2,982,842	880	3,361,375
9	336,894	715,428	9	1,093,961	380	1,472,494	480	1,851,027	580	2,229,561	680	2,608,094	780	2,986,627	880	3,365,160
90	340,679	719,213	290	1,097,746	390	1,476,280	490	1,854,813	590	2,233,346	690	2,611,879	790	2,990,413	890	3,368,946
1	344,465	722,998	1	1,101,332	390	1,480,065	490	1,858,598	590	2,237,131	690	2,615,665	790	2,994,198	890	3,372,731
2	348,256	726,784	2	1,105,317	390	1,483,850	490	1,862,383	590	2,240,917	690	2,619,450	790	2,997,983	890	3,376,516
3	352,039	730,569	3	1,109,102	390	1,487,636	490	1,866,169	590	2,244,702	690	2,623,255	790	3,001,769	890	3,378,835
4	355,821	734,354	4	1,112,888	390	1,491,421	490	1,869,954	590	2,248,487	690	2,627,021	790	3,005,554	890	3,384,087
5	359,606	738,140	5	1,116,673	390	1,495,206	490	1,873,739	590	2,252,273	690	2,630,806	790	3,009,339	890	3,387,872
6	363,391	741,925	6	1,120,458	390	1,498,992	490	1,877,325	590	2,256,058	690	2,634,591	790	3,013,125	890	3,391,658
7	367,177	745,710	7	1,124,244	390	1,502,777	490	1,881,310	590	2,259,843	690	2,638,377	790	3,016,910	890	3,395,443
8	370,962	749,496	8	1,128,029	390	1,506,562	490	1,885,995	590	2,263,629	690	2,642,162	790	3,020,695	890	3,399,228
9	374,747	753,281	9	1,131,814	390	1,510,348	490	1,888,881	590	2,267,414	690	2,645,947	790	3,024,481	890	3,403,014

CAPACITY—LITERS TO GALLONS

[Reduction factor: 1 liter = 0.26417760 gallons]

50

Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons				
0	26.4178	200	52.8355	300	79.2533	400	105.6710	500	132.0888	600	158.5066	700	184.9243	800	211.3421	900	237.7598
1	26.6819	1	53.0997	1	79.5175	1	105.3952	1	132.3550	1	158.7707	1	185.1885	1	211.6063	1	238.0240
2	52.836	2	56.9461	2	79.7816	2	106.1994	2	132.6172	2	159.0349	2	185.4527	2	211.7074	2	238.2882
3	27.2103	3	53.6281	3	79.4058	3	106.7236	3	132.8813	3	159.2691	3	185.7169	3	212.1346	3	238.5524
4	1.0571	4	27.4745	4	80.3100	4	106.7278	4	133.1455	4	159.5633	4	185.9310	4	212.3988	4	238.8166
5	1.32089	5	27.7386	5	54.1564	5	80.5742	5	106.9919	5	133.4097	5	159.8274	5	186.2452	5	212.6630
6	1.58507	6	28.0028	6	54.4206	6	80.8383	6	107.4759	6	133.6759	6	160.0116	6	186.5094	6	212.9271
7	1.84924	7	28.2670	7	54.6848	7	81.1027	7	107.5203	7	133.9380	7	160.3558	7	186.7736	7	213.1913
8	2.11342	8	28.5312	8	54.9489	8	81.3667	8	108.7845	8	134.2022	8	160.6200	8	187.0377	8	213.4555
9	2.37760	9	28.7954	9	55.2131	9	108.0486	9	108.4664	9	134.4664	9	187.3019	9	213.7197	9	240.1374
10	2.64178	110	29.0595	210	55.4773	310	81.8951	410	108.3128	510	134.7306	610	161.1483	710	187.5661	810	213.9839
11	2.90595	1	29.3237	1	55.7415	1	82.1592	1	108.5770	1	134.9948	1	161.4125	1	187.8303	1	214.2480
12	3.17013	2	29.5872	2	56.0057	2	82.4234	2	108.8412	2	135.2589	2	161.6767	2	188.0945	2	214.5764
13	3.43431	3	29.8521	3	56.2698	3	82.6876	3	109.1053	3	135.5231	3	161.9409	3	188.3586	3	214.7764
14	3.69849	4	30.1162	4	56.5340	4	82.9518	4	109.3695	4	135.7873	4	162.2050	4	188.6228	4	215.0406
15	3.96362	5	30.3804	5	56.7982	5	83.2159	5	109.6337	5	136.0515	5	162.4692	5	188.8870	5	215.3047
16	4.22884	6	30.6446	6	57.0624	6	83.4801	6	109.8979	6	136.3156	6	162.7334	6	189.1512	6	215.5689
17	4.49102	7	30.9088	7	57.3265	7	84.0085	7	110.1621	7	136.5798	7	162.9976	7	189.4153	7	215.2509
18	4.75520	8	31.1730	8	57.5907	8	84.0085	8	110.4262	8	136.8440	8	163.2618	8	189.6795	8	215.5150
19	5.01937	9	31.4371	9	57.8549	9	84.2727	9	110.6904	9	137.1082	9	163.5259	9	189.9437	9	216.3615
20	5.28355	120	31.7013	220	58.1191	320	84.5368	420	110.9546	520	137.3724	620	163.7901	720	190.2079	820	216.6256
21	5.54773	1	31.9655	1	58.3832	1	84.8010	1	111.2188	1	137.6365	1	164.0543	1	190.4720	1	216.8898
22	5.81191	2	32.2297	2	58.6474	2	85.0652	2	111.4829	2	137.9007	2	164.3815	2	190.7362	2	217.1540
23	6.07608	3	32.4938	3	85.3294	3	85.3294	3	111.7471	3	138.1649	3	191.0004	3	191.2182	3	217.6823
24	6.34026	4	32.7580	4	59.1758	4	85.5935	4	112.0113	4	138.4291	4	164.8468	4	191.2646	4	214.1001
25	6.60444	5	33.0222	5	59.4400	5	85.8577	5	112.2755	5	138.6932	5	165.1110	5	191.5288	5	217.9465
26	6.86862	6	33.2864	6	59.7041	6	86.1219	6	112.5297	6	138.9574	6	165.3752	6	191.7929	6	218.2107
27	7.13280	7	33.5506	7	59.9683	7	86.3861	7	112.8038	7	139.2216	7	165.6394	7	192.0571	7	218.4749
28	7.39697	8	33.8147	8	60.2325	8	86.6503	8	113.0680	8	139.4858	8	167.9035	8	192.3213	8	218.3791
29	7.66115	9	34.0789	9	60.4967	9	86.9144	9	113.3322	9	139.7500	9	166.1677	9	192.5835	9	219.0032
30	7.92533	130	34.3431	230	60.7608	330	87.1786	430	113.5964	530	140.0141	630	166.4319	730	192.8496	830	219.2674
31	8.18951	1	34.6073	1	61.0250	1	87.4428	1	114.8055	1	140.2783	1	166.6661	1	193.1138	1	219.5316
32	8.45368	2	34.8714	2	61.2892	2	87.7070	2	115.1247	2	140.5445	2	166.9602	2	193.3780	2	219.7958
33	8.71786	3	35.1356	3	61.5534	3	87.9711	3	114.3889	3	140.8067	3	167.2244	3	193.6422	3	220.0599
34	8.98042	4	35.3998	4	61.8176	4	88.2353	4	114.6708	4	141.0708	4	167.4886	4	194.0964	4	220.3241
35	9.24622	5	35.6640	5	62.0817	5	88.4995	5	114.9173	5	141.3350	5	167.7528	5	194.1705	5	220.5883
36	9.51039	6	35.9282	6	62.3459	6	88.7637	6	115.1814	6	141.5992	6	168.0170	6	194.4347	6	220.8525
37	9.77457	7	36.1923	7	62.6161	7	89.0279	7	115.4456	7	141.8634	7	168.5353	7	194.6989	7	221.1167
38	10.03875	8	36.4565	8	62.8743	8	89.2920	8	115.7098	8	142.1275	8	168.5453	8	194.9631	8	221.3808
39	10.30293	9	36.7207	9	63.1384	9	89.5562	9	116.9740	9	142.3917	9	168.8095	9	195.2272	9	221.6450
40	10.56710	140	36.9849	240	63.4026	340	89.8204	440	116.2381	540	142.5559	640	169.3378	740	195.4914	840	218.2269
41	10.83128	1	37.2490	1	63.6668	1	90.0846	1	116.5023	1	142.9201	1	175.7506	1	222.1734	1	248.5911
42	11.09546	2	37.5132	2	63.9310	2	90.3487	2	116.7665	2	143.1843	2	169.6020	2	196.0198	2	222.4375
43	11.35964	3	37.7774	3	64.1952	3	90.6129	3	117.0307	3	143.4484	3	169.8662	3	196.2840	3	222.0017
44	11.62831	4	38.0416	4	64.4593	4	90.8705	4	117.2949	4	143.7130	4	170.1304	4	196.5481	4	222.9659
45	11.88797	5	38.3058	5	64.7235	5	91.1413	5	117.5590	5	143.9768	5	170.3946	5	196.8123	5	223.3031
46	12.15217	6	38.5699	6	64.9877	6	91.4054	6	117.8232	6	144.2410	6	170.6587	6	197.0765	6	223.4942
47	12.41635	7	38.8341	7	65.2519	7	91.6656	7	118.0874	7	144.5051	7	170.9229	7	197.3584	7	225.1762
48	12.68052	8	39.0983	8	65.5160	8	91.9388	8	118.3516	8	144.7693	8	171.1871	8	197.6048	8	224.0226
49	12.94470	9	39.3625	9	65.7802	9	91.1815	9	118.6157	9	145.0335	9	171.4513	9	197.8690	9	225.3868

50	13.20888	150	39.6266	250	66.0444	350	92.4622	450	118.8799	550	145.2977	650	171.7154	750	198.1332	950	224.5510
51	13.47306	1	39.8908	1	66.3086	2	66.5728	1	92.7263	2	92.9905	3	93.625	1	119.1441	1	145.5619
2	13.3724	2	40.1550	3	40.4192	3	66.8366	2	66.9357	3	69.1011	4	69.4834	4	69.5189	2	92.9905
3	14.26559	4	40.6834	3	43.0699	3	69.4787	4	69.5353	5	67.9830	5	67.9830	6	69.40472	5	119.9366
4	14.5297	5	40.9475	6	41.2117	6	67.6295	7	67.8936	7	67.8936	8	68.1578	9	68.1578	7	119.9366
5	14.79395	6	41.4759	7	41.4759	8	41.7401	9	42.0042	9	42.0042	9	42.0042	9	42.0042	9	119.9366
6	15.58182	7	41.55812	8	41.55812	9	41.55812	9	41.55812	9	41.55812	9	41.55812	9	41.55812	9	119.9366
7	15.82250	9	41.58648	9	41.58648	9	41.58648	9	41.58648	9	41.58648	9	41.58648	9	41.58648	9	119.9366
8	16.0737	10	41.62420	10	41.62420	11	41.62420	10	41.62420	11	41.62420	12	41.62420	11	41.62420	10	119.9366
9	16.37901	12	42.7968	12	42.7968	13	42.7968	12	42.7968	13	42.7968	14	42.7968	13	42.7968	12	119.9366
10	16.64319	13	43.0699	14	43.2351	14	43.2351	13	43.2351	14	43.2351	15	43.2351	14	43.2351	13	119.9366
11	16.90737	15	43.5893	15	43.5893	16	43.5893	15	43.5893	16	43.5893	17	43.5893	16	43.5893	15	119.9366
12	17.17154	16	43.8535	16	43.8535	17	43.8535	16	43.8535	17	43.8535	18	43.8535	17	43.8535	16	119.9366
13	17.4372	17	44.1177	17	44.1177	18	44.3818	17	44.3818	18	44.6460	19	44.6460	18	44.6460	17	119.9366
14	17.79990	18	44.7596	18	44.7596	19	45.0258	18	45.0258	19	45.3818	20	45.3818	19	45.3818	18	119.9366
15	18.16508	19	44.8608	19	44.8608	20	45.1260	19	45.1260	20	45.4844	21	45.4844	20	45.4844	19	119.9366
16	18.2825	20	45.1260	20	45.1260	21	45.1260	20	45.1260	21	45.1260	22	45.1260	21	45.1260	20	119.9366
17	18.49243	21	45.49102	21	45.49102	22	45.49102	21	45.49102	22	45.75457	23	45.75457	22	45.75457	21	119.9366
18	18.75661	22	45.75457	22	45.75457	23	46.01959	22	46.01959	23	46.28120	24	46.28120	23	46.28120	22	119.9366
19	19.02079	23	46.01959	23	46.01959	24	46.28120	23	46.28120	24	46.55363	25	46.55363	24	46.55363	23	119.9366
20	19.28946	24	46.28120	24	46.28120	25	46.55363	24	46.55363	25	46.82395	26	46.82395	25	46.82395	24	119.9366
21	19.54914	25	46.55363	25	46.55363	26	46.82395	25	46.82395	26	47.09397	27	47.09397	26	47.09397	25	119.9366
22	19.81332	26	46.82395	26	46.82395	27	47.09397	26	47.09397	27	47.36400	28	47.36400	27	47.36400	26	119.9366
23	20.07750	27	47.09397	27	47.09397	28	47.36400	27	47.36400	28	47.63403	29	47.63403	28	47.63403	27	119.9366
24	20.34168	28	47.36400	28	47.36400	29	47.63403	28	47.63403	29	47.89590	30	47.89590	29	47.89590	28	119.9366
25	20.60595	29	47.63400	29	47.63400	30	47.89590	29	47.89590	30	48.15697	31	48.15697	30	48.15697	29	119.9366
26	20.87003	30	47.89590	30	47.89590	31	48.15697	30	48.15697	31	48.42760	32	48.42760	31	48.42760	30	119.9366
27	21.13421	31	48.15697	31	48.15697	32	48.42760	31	48.42760	32	48.69832	33	48.69832	32	48.69832	31	119.9366
28	21.39839	32	48.42760	32	48.42760	33	48.69832	32	48.69832	33	48.96865	34	48.96865	33	48.96865	32	119.9366
29	21.66264	33	48.69832	33	48.69832	34	49.03835	33	49.03835	34	49.30868	35	49.30868	34	49.30868	33	119.9366
30	21.92674	34	49.03835	34	49.03835	35	49.30868	34	49.30868	35	49.57878	36	49.57878	35	49.57878	34	119.9366
31	22.19092	35	49.30868	35	49.30868	36	49.57878	35	49.57878	36	49.84844	37	49.84844	36	49.84844	35	119.9366
32	22.45510	36	49.57878	36	49.57878	37	49.84844	36	49.84844	37	50.11882	38	50.11882	37	50.11882	36	119.9366
33	22.71927	37	49.84844	37	49.84844	38	50.11882	37	50.11882	38	50.38880	39	50.38880	38	50.38880	37	119.9366
34	22.98345	38	50.11882	38	50.11882	39	50.38880	38	50.38880	39	50.65816	40	50.65816	39	50.65816	38	119.9366
35	23.24763	39	50.38880	39	50.38880	40	50.65816	39	50.65816	40	50.92696	41	50.92696	40	50.92696	39	119.9366
36	23.51181	40	50.65816	40	50.65816	41	50.92696	40	50.92696	41	51.1937	42	51.1937	41	51.1937	40	119.9366
37	23.77598	41	50.92696	41	50.92696	42	51.1937	41	51.1937	42	51.46343	43	51.46343	42	51.46343	41	119.9366
38	24.04016	42	51.1937	42	51.1937	43	51.46343	42	51.46343	43	51.73380	44	51.73380	43	51.73380	42	119.9366
39	24.3034	43	51.46343	43	51.46343	44	51.73380	43	51.73380	44	51.99378	45	51.99378	44	51.99378	43	119.9366
40	24.56852	44	51.73380	44	51.73380	45	51.99378	44	51.99378	45	52.26376	46	52.26376	45	52.26376	44	119.9366
41	24.83369	45	51.99378	45	51.99378	46	52.26376	45	52.26376	46	52.53368	47	52.53368	46	52.53368	45	119.9366
42	25.10667	46	52.26376	46	52.26376	47	52.53368	46	52.53368	47	52.80362	48	52.80362	47	52.80362	46	119.9366
43	25.36120	47	52.53368	47	52.53368	48	52.80362	47	52.80362	48	53.07356	49	53.07356	48	53.07356	47	119.9366
44	25.62223	48	52.80362	48	52.80362	49	53.07356	48	53.07356	49	53.34353	50	53.34353	49	53.34353	48	119.9366
45	25.88940	49	53.07356	49	53.07356	50	53.34353	49	53.34353	50	53.61359	51	53.61359	50	53.61359	49	119.9366
46	26.15538	50	53.34353	50	53.34353	51	53.61359	50	53.61359	51	53.88357	52	53.88357	51	53.88357	50	119.9366

# CAPACITY—BUSHELS TO HECTOLITERS

[Reduction factor: 1 bushel = 0.35338330 hectoliters]

Bushels	Hectoliters	Bushels	Hectoliters	Bushels	Hectoliters	Bushels	Hectoliters	Bushels	Hectoliters	Bushels	Hectoliters	Bushels	Hectoliters	Bushels	Hectoliters	
0	0	35.2383	200	70.4767	300	105.7150	400	140.9533	500	176.1917	600	211.4300	700	246.6683	800	281.0066
1	1	35.2907	1	70.8290	2	106.0674	1	141.3057	1	176.5440	2	211.7824	1	247.0207	1	282.3590
2	2	35.9431	2	71.1814	3	106.4198	2	141.6933	2	176.8964	3	212.1347	2	247.3731	2	282.6114
3	3	36.2955	3	71.5338	4	106.7722	3	142.0105	3	177.2488	4	212.4871	3	247.7255	3	282.9638
4	4	36.6479	4	71.8862	4	107.1245	4	142.3629	4	177.6012	4	212.8395	4	248.0778	4	283.3162
5	5	37.0002	5	72.2386	5	107.4769	5	142.7152	5	177.9536	6	213.1919	5	248.4302	5	283.6866
6	6	2.1130	6	72.5910	6	107.8239	6	143.0676	6	178.3060	6	213.5443	6	248.7826	6	284.3739
7	7	37.7050	7	71.9433	7	108.1817	7	143.4200	7	178.5883	7	213.8967	7	249.1774	7	284.3733
8	8	2.81907	8	73.2574	8	108.5341	8	143.7724	8	179.0107	8	214.2490	8	249.4874	8	284.6940
9	9	3.17145	9	73.6481	9	108.8864	9	144.1248	9	179.3631	9	214.6014	9	249.8398	9	285.0781
10	10	3.52883	110	38.7662	210	74.0005	310	109.2388	410	144.4772	510	179.7155	610	214.9538	710	250.1921
11	11	39.1145	111	74.3329	112	109.5912	111	144.8295	112	180.0679	111	215.0662	111	250.5445	110	285.4305
12	12	4.22660	122	39.6669	124	70.7053	122	109.9436	124	145.1819	122	180.1203	122	215.6868	122	256.1352
13	13	4.58098	132	39.8193	133	70.0576	130	110.2960	134	145.5243	130	180.7256	130	216.0110	130	251.2493
14	14	4.93337	142	40.1717	144	75.4100	140	110.6484	144	145.8867	140	181.1250	140	216.3633	140	251.6017
15	15	5.28575	152	40.5241	155	75.7624	151	111.0037	155	146.2391	151	181.4774	151	216.7157	151	251.9541
16	16	5.63813	162	40.8765	166	76.1148	161	111.3551	166	146.5915	161	181.8298	161	216.3064	161	252.3848
17	17	5.99052	172	41.2288	177	76.4672	171	111.7055	177	146.9438	171	182.1822	171	217.4205	171	252.6588
18	18	6.34928	182	41.5812	188	76.8196	182	112.0579	188	147.2962	182	182.3346	182	217.7229	182	252.0495
19	19	6.69328	192	41.9336	197	77.1719	192	112.4103	197	147.6486	192	182.8869	192	218.1253	192	253.0636
20	20	7.04765	120	42.2860	220	77.5453	220	112.7627	420	148.0010	520	183.2393	620	218.4776	720	253.7160
21	21	7.40055	121	42.6384	221	77.8167	221	113.1150	421	148.3334	521	183.5917	621	218.8300	721	254.0684
22	22	7.75243	122	42.9908	222	78.2291	222	113.4674	422	148.7058	522	184.9441	622	219.8872	722	254.4207
23	23	8.10822	123	43.3431	223	78.5815	223	113.8198	423	149.0581	523	185.2965	623	219.5348	723	254.7731
24	24	43.6955	432	43.6955	442	78.9339	434	114.1722	442	149.4105	444	184.6489	444	219.8872	444	255.1255
25	25	8.45720	433	44.0479	452	79.2862	435	114.5246	452	149.7629	454	185.0012	454	220.2396	455	255.4779
26	26	8.80958	444	44.0033	463	79.6386	446	114.8770	463	150.1153	465	185.3536	465	220.5919	466	255.8303
27	27	9.16197	464	44.7527	473	79.9723	467	115.2239	474	149.6777	477	180.7060	477	220.9443	477	256.1827
28	28	9.51435	474	45.1051	483	80.3343	478	115.5817	482	150.2021	487	186.0584	487	221.5327	488	256.5327
29	29	8.96673	484	45.4574	493	80.6958	492	115.9341	495	151.1724	499	186.4108	499	221.9341	500	256.8874
30	30	10.57150	130	45.8098	230	81.0482	230	116.2865	430	151.5448	530	186.7631	630	222.0015	730	257.2398
31	31	11.29288	141	46.1622	241	81.4905	241	116.6389	441	152.8772	541	187.1155	641	222.5359	741	257.5922
32	32	11.27272	2	46.5146	2	81.8572	2	116.9913	2	152.2296	2	187.4679	2	222.7062	2	257.9446
33	33	11.22655	3	46.8670	3	82.1053	3	117.3436	3	152.5820	3	187.8203	3	223.0586	3	258.2970
34	34	11.98103	4	47.2194	4	82.4577	4	117.6960	4	152.9344	4	188.1727	4	223.4110	4	258.2979
35	35	12.33242	5	47.5717	5	82.8101	5	118.0484	5	153.2867	5	188.5251	5	223.7634	5	259.0017
36	36	12.68580	6	47.1241	6	83.1548	6	118.4088	6	153.6391	6	188.8774	6	224.1158	6	259.3774
37	37	13.03818	7	47.2765	7	83.5148	7	118.7532	7	153.9915	7	189.2298	7	224.4682	7	259.7065
38	38	48.6289	8	83.8672	8	119.1056	8	119.3439	8	154.8822	8	189.5936	8	224.8205	8	260.0589
39	39	13.74955	9	48.9813	9	84.2196	9	119.4579	9	154.6963	9	189.9346	9	225.1729	9	260.4113
40	40	14.09333	140	49.3327	240	84.7444	240	119.8103	440	155.0487	540	190.2870	640	225.5553	740	260.7636
41	41	14.44772	141	49.6860	241	84.9244	241	120.1627	441	155.4010	541	190.6394	641	225.8777	741	261.1160
42	42	14.80010	2	50.0384	2	85.2768	2	120.5151	2	156.5440	2	190.9917	2	226.3031	2	261.4684
43	43	15.15248	3	50.3908	3	120.8675	3	156.1058	3	191.3441	3	226.5825	3	261.8208	3	262.4422
44	44	15.04832	4	50.7432	4	85.9815	4	121.2199	4	156.4882	4	191.6965	4	226.9348	4	262.1732
45	45	15.85275	5	51.0956	5	86.3329	5	121.5722	5	156.8106	5	192.0489	5	227.8872	5	262.5256
46	46	16.20653	6	51.4480	6	86.6863	6	121.9630	6	157.1630	6	192.4013	6	227.6596	6	262.8877
47	47	16.56023	7	51.0003	7	87.0387	7	122.2770	7	157.5153	7	192.7537	7	228.4687	7	263.2303
48	48	16.91440	8	52.1527	8	87.3911	8	122.6294	8	157.8677	8	193.1060	8	228.5827	8	263.8210
49	49	17.26678	9	52.5051	9	87.7434	9	122.9818	9	158.2201	9	193.4584	9	228.8210	9	263.9351

50	17,61917	150	52,8575	250	88,0958	350	123,3342	450	158,5725	550	193,8108	650	229,0491	750	264,2875	850	299,5258	950	334,7641
1	17,97155	1	53,2099	1	88,4482	1	123,6865	1	158,9249	1	194,1632	1	229,4015	1	264,6399	1	299,8782	1	335,1165
2	18,32393	2	53,5623	2	88,8006	2	124,0389	2	159,2773	2	194,5156	2	229,7539	2	264,9922	2	300,2306	2	335,4689
3	18,67631	3	53,9146	3	89,1530	3	124,3913	3	159,6296	3	194,8860	3	230,1063	3	265,3446	3	300,5830	3	335,8213
4	19,02870	4	54,2870	4	89,5034	4	124,7437	4	159,2203	4	195,4587	4	230,1111	5	266,0494	4	300,9553	4	336,1737
5	19,38108	5	54,6194	5	89,8577	5	125,0961	5	160,3344	5	195,5127	5	230,8111	5	266,4018	5	301,2877	5	336,5261
6	19,73546	6	54,9718	6	90,2101	6	125,4485	6	160,8868	6	195,9551	6	231,1034	6	266,4018	6	301,6001	6	336,8784
7	20,08585	7	55,3342	7	90,5625	7	125,8008	7	161,0392	7	196,2775	7	231,5158	7	266,7582	7	301,9245	7	337,2308
8	20,48823	8	55,6768	8	90,9149	8	126,1632	8	161,9916	8	196,6399	8	231,8682	8	267,1065	8	302,3449	8	337,5832
9	20,79051	9	56,0389	9	91,2673	9	126,5056	9	161,7439	9	196,9823	9	232,2206	9	267,4589	9	302,6673	9	337,9356
60	21,14300	160	56,3813	260	91,6197	360	127,6504	460	166,8580	560	197,6870	660	232,3346	760	267,8113	860	303,0496	960	338,2880
1	21,49538	1	56,7337	1	91,9720	1	127,2104	1	162,4487	1	197,6870	1	232,5254	1	268,1637	1	303,4620	1	338,6404
2	21,84766	2	57,0861	2	92,3244	2	127,4822	2	162,8011	2	198,0894	2	233,2777	2	268,5101	2	303,7444	2	338,9927
3	22,20015	3	57,4385	3	92,6768	3	127,9151	3	163,1535	3	198,3918	3	233,6301	4	268,8685	3	304,1068	4	339,3451
4	22,55253	4	57,7909	4	93,0292	4	128,2675	4	163,8059	4	198,7442	4	233,9825	4	269,2208	4	304,4992	4	339,6975
5	22,90491	5	58,1432	5	93,3816	5	128,6199	5	163,8582	5	199,0966	5	234,3349	5	269,5732	5	304,8116	5	340,0499
6	23,25730	6	58,4956	6	93,7340	6	128,9723	6	164,2106	6	199,4489	6	234,6873	6	269,9256	6	305,1639	6	340,4023
7	23,60968	7	58,8848	7	94,0663	7	129,3347	7	164,5630	7	199,8013	7	235,0597	7	270,2780	7	305,5163	7	340,7547
8	23,96205	8	59,2004	8	94,4387	8	129,6771	8	164,7671	8	194,9154	8	235,3920	8	270,6304	8	305,8887	8	341,1070
9	24,31445	9	59,5328	9	94,7911	9	130,0394	9	165,2678	9	195,7235	9	235,7444	9	270,9828	9	306,2211	9	341,4594
70	24,66683	170	59,9052	270	95,1435	370	130,3818	470	165,6202	570	200,8585	670	236,0968	770	271,3351	870	306,5735	970	341,8118
1	25,01921	1	60,2575	1	95,4959	1	130,7342	1	165,9725	1	201,2109	1	236,4492	1	271,6875	1	306,9559	1	342,1642
2	25,37160	2	60,6099	2	95,8483	2	131,0865	2	166,2439	2	201,5632	2	236,8016	2	272,0399	2	307,2862	2	342,5166
3	25,72398	3	60,9623	3	96,2006	3	131,4390	3	166,0773	3	201,9156	3	237,1540	3	272,3923	3	307,6306	3	342,8690
4	26,07366	4	61,3147	4	96,5530	4	131,7914	4	167,0297	4	202,2680	4	237,5063	4	272,7447	4	307,9330	4	343,2213
5	26,42875	5	61,6671	5	96,9054	5	132,1437	5	167,3821	5	202,6204	5	237,9587	5	273,0971	5	308,3354	5	343,5377
6	26,78113	6	62,0195	6	97,2578	6	132,4951	6	167,7395	6	202,9728	6	238,2111	6	273,4494	6	308,6678	6	343,9261
7	27,13351	7	62,3718	7	97,6102	7	132,8485	7	168,0868	7	203,3525	7	238,5335	7	274,8018	7	309,0402	7	344,2785
8	27,48590	8	62,9266	8	103,2009	8	168,7320	8	203,6775	8	238,9159	8	274,5142	8	309,3255	8	344,6309	9	344,9833
9	27,883828	9	63,0766	9	98,3149	9	133,5533	9	168,7916	9	204,0299	9	239,2683	9	274,5066	9	309,7449	9	344,9833
80	28,19065	180	63,4290	280	98,6673	380	133,9057	480	169,1440	580	204,3823	680	239,5206	780	274,8590	880	310,0773	980	345,3356
1	28,54305	1	63,7814	1	99,0197	1	134,2580	1	169,4964	1	204,7347	1	239,3230	1	275,2114	1	310,4497	1	345,6880
2	28,89543	2	64,1338	2	99,3721	2	134,6104	2	169,8488	2	205,0871	2	240,3254	2	275,5637	2	310,8021	2	346,0404
3	29,24781	3	64,4861	3	100,0769	3	134,9628	3	170,2011	3	205,4939	3	240,6778	3	275,9161	3	311,1345	3	346,3928
4	29,60020	4	64,8385	4	100,4292	4	135,3152	4	170,5535	4	207,9118	4	241,0302	4	276,2685	4	311,5068	4	346,7452
5	29,95258	5	65,1909	5	100,4292	5	135,6675	5	170,9059	5	206,1442	5	241,3826	5	276,6209	5	311,8892	5	347,0976
6	30,30498	6	65,5433	6	100,7816	6	171,2583	6	206,4966	6	206,4966	6	246,7349	6	276,9733	6	312,2116	6	347,4499
7	30,65735	7	65,8957	7	101,1340	7	136,3723	7	171,6107	7	206,8190	7	242,0873	7	277,3257	7	312,5440	7	347,8023
8	31,00973	8	66,2481	8	101,4864	8	136,7447	8	171,1631	8	207,2014	8	242,4397	8	277,6780	8	312,9164	8	348,1547
9	31,36211	9	66,6004	9	101,8388	9	137,0771	9	172,3154	9	207,5538	9	242,7921	9	278,0304	9	313,2688	9	348,5071
90	31,71450	190	66,9528	290	102,1912	390	137,4295	490	172,6678	590	207,9061	690	243,1445	790	278,3828	890	313,6211	990	348,8595
1	32,06688	1	67,3052	1	102,5435	1	137,7919	1	173,0202	1	208,2585	1	243,5969	1	278,7352	1	313,9735	1	349,2119
2	32,41926	2	67,6576	2	102,8959	2	138,1343	2	173,3726	2	208,6109	2	243,8492	2	279,0876	2	314,3259	2	349,5042
3	32,77165	3	68,0100	3	103,4483	3	138,4866	3	173,250	3	208,9633	3	244,3246	3	279,4400	3	314,6783	3	349,9166
4	33,12403	4	68,3624	4	103,6007	4	138,8390	4	174,0774	4	209,3157	4	244,5540	4	279,7923	4	315,3017	4	350,2690
5	33,47641	5	68,7147	5	103,9531	5	139,1914	5	174,4297	5	209,6681	5	244,9064	5	280,1447	5	315,3831	5	350,6214
6	33,82880	6	69,0671	6	104,3955	6	139,5433	6	174,7821	6	210,0204	6	245,2588	6	280,4971	6	315,7554	6	350,9738
7	34,18118	7	69,4195	7	104,4578	7	139,8952	7	175,3345	7	210,3728	7	245,6112	7	281,8495	7	315,3262	7	351,3262
8	34,55356	8	69,7719	8	105,0102	8	140,2486	8	175,8869	8	210,5625	8	245,9635	8	281,5543	9	316,4402	8	351,6785
9	34,88595	9	70,1243	9	105,3626	9	140,6009	9	175,8393	9	211,0776	9	246,3159	9	281,5543	9	316,7926	9	352,0309

CAPACITY—HECTOLITERS TO BUSHELS

[Reduction factor: 1 hectoliter = 2.83785 bushels]

Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels
0	100	283.782	200	567.564	300	851.346	400	1,135.128	500	1,418.909	600	1,702.691	700	1,986.473	800	2,270.255	900	2,554.037
1	2.8378	286.620	1	570.402	2	854.183	1	1,167.963	1	1,421.747	2	1,708.367	1	1,989.311	1	2,273.093	2	2,556.875
2	5.6756	289.458	2	573.239	3	859.021	2	140.803	2	1,424.585	3	1,711.205	2	1,992.149	2	2,275.931	2	2,559.713
3	8.5135	292.255	3	566.077	3	859.589	3	143.641	3	1,427.423	4	1,711.205	3	1,994.987	3	2,278.769	3	2,562.550
4	11.3513	295.133	4	578.915	4	862.697	4	146.226	4	1,430.261	4	1,714.043	4	1,997.825	4	2,281.606	4	2,565.388
5	14.1891	297.971	5	581.753	5	851.346	5	149.317	5	1,433.099	5	1,716.880	5	2,000.662	5	2,284.444	5	2,568.226
6	17.0269	300.809	6	584.591	6	868.373	6	152.154	6	1,435.936	6	1,719.718	6	2,003.500	6	2,287.282	6	2,571.964
7	19.8674	303.647	7	587.429	7	871.210	7	154.992	7	1,438.774	7	1,722.556	7	2,006.338	7	2,290.120	7	2,573.902
8	22.7026	306.484	8	590.266	8	874.048	8	157.830	8	1,441.612	8	1,725.894	8	2,009.176	8	2,292.958	8	2,576.740
9	25.5404	309.322	9	593.104	9	876.886	9	160.668	9	1,444.450	9	1,728.232	9	2,012.014	9	2,295.796	9	2,579.577
10	28.3782	312.160	210	595.942	310	879.724	410	1,163.304	510	1,447.288	610	1,731.070	710	2,014.851	810	2,298.633	910	2,582.415
11	31.2160	314.998	1	598.780	1	882.562	1	166.330	1	1,450.125	1	1,733.907	1	2,017.689	1	2,301.471	1	2,585.253
12	34.0538	317.836	2	601.618	2	885.400	2	169.181	2	1,452.963	2	1,736.745	2	2,020.527	2	2,304.309	2	2,588.091
13	36.8916	320.674	3	604.455	3	888.237	3	172.019	3	1,455.801	3	1,739.583	3	2,023.365	3	2,307.147	3	2,590.929
14	39.7295	323.511	4	607.293	4	891.075	4	174.857	4	1,458.639	4	1,742.421	4	2,026.203	4	2,309.965	4	2,593.766
15	42.5673	326.349	5	610.131	5	893.913	5	177.695	5	1,461.477	5	1,745.259	5	2,029.041	5	2,312.822	5	2,596.604
16	45.4051	329.187	6	612.969	6	896.751	6	180.533	6	1,464.315	6	1,748.096	6	2,031.878	6	2,315.660	6	2,599.442
17	48.2429	332.025	7	615.807	7	899.589	7	183.370	7	1,467.152	7	1,750.934	7	2,034.716	7	2,318.498	7	2,602.280
18	51.0807	334.863	8	602.426	8	902.426	8	168.208	8	1,469.960	8	1,753.772	8	2,037.554	8	2,321.336	8	2,605.118
19	53.9186	337.700	9	621.482	9	905.264	9	189.046	9	1,472.828	9	1,756.610	9	2,040.392	9	2,324.174	9	2,607.936
20	56.7564	340.538	220	624.320	320	908.102	420	1,191.884	520	1,475.666	620	1,759.448	720	2,043.230	820	2,327.012	920	2,610.793
21	59.5942	343.376	1	910.940	1	194.722	1	197.560	1	1,481.341	2	1,765.123	2	2,046.067	2	2,329.849	2	2,616.461
22	62.4320	346.214	2	629.996	2	197.560	2	197.560	2	1,484.179	3	1,767.961	3	2,051.743	3	2,335.525	3	2,619.307
23	65.2698	349.052	3	632.834	3	616.616	3	200.397	3	1,484.179	4	1,767.961	4	2,054.581	4	2,341.363	4	2,622.145
24	68.1077	351.890	4	635.671	4	919.453	4	197.453	4	1,487.017	4	1,767.991	4	2,054.581	5	2,341.201	5	2,624.982
25	70.9455	354.727	5	638.509	5	922.291	5	206.073	5	1,489.835	5	1,773.637	5	2,057.419	5	2,346.028	6	2,627.820
26	73.7833	357.565	6	641.347	6	925.129	6	210.911	6	1,492.693	6	1,776.475	6	2,060.257	6	2,344.038	7	2,630.658
27	76.6211	360.403	7	644.185	7	927.967	7	211.749	7	1,495.531	7	1,779.312	7	2,063.094	7	2,346.876	7	2,633.496
28	79.4589	363.241	8	647.023	8	930.305	8	214.586	8	1,498.368	8	1,782.150	8	2,065.932	8	2,349.714	8	2,636.334
29	82.2967	366.079	9	649.861	9	933.642	9	217.424	9	1,501.206	9	1,784.988	9	2,068.770	9	2,352.552	9	2,636.334
30	85.1346	368.916	240	652.698	340	936.310	430	1,220.262	530	1,504.044	630	1,787.326	730	2,071.608	830	2,355.390	930	2,639.172
31	87.9724	371.754	1	655.536	1	939.318	1	223.100	1	504.882	1	1,790.664	1	2,074.446	1	2,358.228	1	2,642.009
32	90.8102	374.592	2	658.374	2	942.156	2	225.155	2	509.720	2	1,793.502	2	2,078.283	2	2,361.665	2	2,644.847
33	93.6480	377.430	3	661.212	3	944.994	3	228.776	3	512.557	3	1,796.339	3	2,080.121	3	2,363.903	3	2,647.685
34	96.4858	380.268	4	664.050	4	947.832	4	231.613	4	515.395	4	1,799.177	4	2,082.959	4	2,366.741	4	2,650.523
35	99.3337	383.106	5	666.887	5	950.669	5	234.451	5	1,818.233	5	1,802.015	5	2,085.797	5	2,369.579	5	2,653.361
36	102.1615	385.943	6	669.725	6	953.345	6	237.289	6	1,821.071	6	1,808.635	6	2,088.635	6	2,372.517	6	2,656.199
37	104.9933	388.771	7	672.563	7	956.345	7	240.127	7	1,823.909	7	1,809.473	7	2,087.254	7	2,375.254	7	2,659.036
38	107.8371	391.619	8	675.401	8	959.183	8	1,242.965	8	1,826.747	8	1,810.328	8	2,094.310	8	2,378.092	8	2,661.874
39	110.6749	394.457	9	678.239	9	962.021	9	1,245.803	9	1,829.584	9	1,813.366	9	2,097.148	9	2,380.930	9	2,664.712
40	113.5128	397.295	240	681.077	340	964.838	440	1,248.640	540	1,532.422	640	1,816.204	740	2,099.986	840	2,383.768	940	2,667.550
41	116.3552	400.132	1	683.914	1	967.699	1	254.478	1	1,538.098	2	1,821.880	2	2,105.662	2	2,386.606	2	2,670.388
42	119.1884	402.970	2	686.752	2	970.534	2	254.478	2	1,540.936	3	1,824.718	3	2,108.499	3	2,389.444	3	2,672.225
43	122.0262	405.808	3	689.590	3	973.372	3	257.154	3	1,543.773	4	1,827.555	4	2,111.337	4	2,395.281	4	2,676.063
44	124.8640	408.646	4	692.428	4	976.210	4	259.992	4	1,545.773	5	1,830.393	5	2,114.175	5	2,397.957	5	2,681.739
45	127.7019	411.484	5	695.266	5	979.048	5	262.829	5	1,546.611	6	1,833.231	6	2,117.013	6	2,400.795	6	2,684.577
46	130.5375	414.322	6	698.103	6	981.885	6	265.667	6	1,547.449	7	1,835.091	7	2,119.851	7	2,403.633	7	2,687.415
47	133.3775	417.159	7	700.941	7	984.723	7	268.505	7	1,552.287	8	1,836.069	8	2,122.689	8	2,406.470	8	2,690.252
48	136.2153	420.997	8	849.997	8	987.561	8	703.779	8	1,555.125	9	1,838.907	9	2,125.526	9	2,409.308	9	2,693.990
49	139.0531	422.835	9	942.835	9	990.399	9	706.617	9	1,557.963	9	1,841.744	9	2,125.526	9	2,409.308	9	2,693.990

50	141,8909	150	425,673	250	709,455	350	903,237	450	1,277,019	550	1,560,800	650	1,844,582	750	2,128,364	850	2,412,146	950	2,695,928
1	144,2288	1	428,511	1	712,293	1	966,074	1	1,279,836	1	1,563,638	1	1,847,420	1	2,131,202	1	2,414,984	1	2,698,766
2	147,3666	2	431,348	2	715,130	2	988,912	2	1,282,694	2	1,566,476	2	1,850,258	2	2,147,222	2	2,701,604	2	2,810,644
3	150,4044	3	434,186	3	719,968	3	1,001,750	3	1,285,532	3	1,569,314	3	1,853,096	3	2,136,878	3	2,420,660	3	2,707,279
4	153,2422	4	437,024	4	720,806	4	1,004,588	4	1,288,370	4	1,572,152	4	1,855,934	4	2,139,715	4	2,433,497	4	2,710,117
5	156,8800	5	439,862	5	723,644	5	1,007,426	5	1,291,405	5	1,574,989	5	1,856,771	5	2,142,533	5	2,426,335	5	2,712,955
6	158,3179	6	442,700	6	726,482	6	1,010,264	6	1,294,827	6	1,577,616	6	1,861,609	6	2,145,391	6	2,429,173	6	2,715,793
7	161,7557	7	445,538	7	729,319	7	1,013,101	7	1,296,883	7	1,580,665	7	1,864,447	7	2,148,229	7	2,432,011	7	2,718,631
8	164,5935	8	448,375	8	732,157	8	1,015,939	8	1,299,721	8	1,583,503	8	1,867,285	8	2,151,867	8	2,434,849	8	2,718,333
9	167,4313	9	451,213	9	734,955	9	1,018,777	9	1,302,559	9	1,586,341	9	1,870,123	9	2,153,905	9	2,437,686	9	2,721,468
60	170,2691	160	454,051	260	737,833	360	1,021,615	460	1,305,397	560	1,589,179	660	1,872,960	760	2,156,742	860	2,440,524	960	2,724,306
1	171,4070	1	456,889	1	740,671	1	1,024,553	1	1,308,255	1	1,592,016	1	1,875,798	1	2,159,580	1	2,427,144	1	2,729,982
2	175,9448	2	459,727	2	743,509	2	1,027,072	2	1,311,072	2	1,594,854	2	1,878,636	2	2,162,418	2	2,446,200	2	2,732,820
3	178,7822	3	462,364	3	746,436	3	1,030,128	3	1,313,910	3	1,597,692	3	1,881,474	3	2,165,938	3	2,449,038	3	2,735,657
4	181,6204	4	465,402	4	749,184	4	1,032,966	4	1,316,748	4	1,600,530	4	1,884,312	4	2,168,094	4	2,451,876	4	2,738,495
5	184,4582	5	468,240	5	752,022	5	1,035,804	5	1,319,586	5	1,603,368	5	1,887,150	5	2,170,931	5	2,454,713	5	2,741,333
6	187,2960	6	471,078	6	754,880	6	1,038,642	6	1,322,424	6	1,606,206	6	1,890,987	6	2,173,769	6	2,457,551	6	2,746,389
7	190,1339	7	473,916	7	757,698	7	1,041,880	7	1,325,261	7	1,609,043	7	1,892,825	7	2,176,607	7	2,454,171	7	2,747,009
8	193,8717	8	476,754	8	760,535	8	1,044,710	8	1,328,097	8	1,611,881	8	1,895,663	8	2,179,523	8	2,456,025	8	2,747,847
9	195,8093	9	479,591	9	763,373	9	1,047,155	9	1,330,937	9	1,614,719	9	1,898,501	9	2,182,283	9	2,466,065	9	2,749,847
70	198,6473	170	482,429	270	766,211	370	1,049,993	470	1,333,775	570	1,617,557	670	1,901,339	770	2,185,121	870	2,468,902	970	2,752,684
1	201,4851	1	485,267	1	769,049	1	1,052,331	1	1,336,613	1	1,620,395	1	1,904,176	1	2,187,958	1	2,471,140	1	2,755,522
2	204,3230	2	488,105	2	771,887	2	1,055,669	2	1,339,451	2	1,623,070	2	1,907,014	2	2,190,578	2	2,475,366	2	2,761,198
3	207,1608	3	490,943	3	774,725	3	1,058,506	3	1,342,288	3	1,626,070	3	1,909,852	3	2,193,634	3	2,477,416	3	2,765,036
4	209,7986	4	493,780	4	777,562	4	1,061,344	4	1,345,126	4	1,628,908	4	1,912,690	4	2,196,472	4	2,480,254	4	2,768,373
5	212,8364	5	496,618	5	780,400	5	1,064,182	5	1,347,964	5	1,631,746	5	1,915,528	5	2,199,310	5	2,483,092	5	2,769,711
6	215,6722	6	499,556	6	783,238	6	1,067,020	6	1,350,802	6	1,634,584	6	1,918,366	6	2,202,147	6	2,485,929	6	2,772,549
7	218,5121	7	502,294	7	786,076	7	1,069,558	7	1,353,640	7	1,637,422	7	1,921,022	7	2,204,985	7	2,488,767	7	2,775,387
8	221,3499	8	505,132	8	787,914	8	1,072,996	8	1,356,477	8	1,640,259	8	1,924,041	8	2,207,833	8	2,491,605	8	2,778,225
9	224,1877	9	507,970	9	791,751	9	1,075,533	9	1,359,315	9	1,643,097	9	1,926,879	9	2,210,661	9	2,494,443	9	2,778,225
80	227,0255	180	510,807	280	808,589	380	1,078,371	480	1,362,153	580	1,645,935	680	1,929,717	780	2,213,499	880	2,497,281	980	2,781,063
1	229,8633	1	513,645	1	797,427	1	1,081,209	1	1,364,991	1	1,648,773	1	1,932,555	1	2,216,337	1	2,500,118	1	2,783,900
2	232,7012	2	516,483	2	800,265	2	1,084,047	2	1,367,829	2	1,651,611	2	1,935,393	2	2,219,174	2	2,502,956	2	2,786,738
3	235,3790	3	519,321	3	803,103	3	1,086,385	3	1,370,522	3	1,654,448	3	1,938,230	3	2,220,012	3	2,505,794	3	2,788,416
4	238,3768	4	522,159	4	805,941	4	1,089,722	4	1,373,504	4	1,657,286	4	1,941,068	4	2,224,830	4	2,508,632	4	2,792,414
5	241,2146	5	524,996	5	808,778	5	1,092,560	5	1,376,342	5	1,660,124	5	1,943,906	5	2,227,688	5	2,511,470	5	2,795,522
6	244,0534	6	527,834	6	811,616	6	1,095,398	6	1,379,180	6	1,662,962	6	1,946,744	6	2,230,536	6	2,514,308	6	2,798,089
7	246,8902	7	530,672	7	814,434	7	1,098,236	7	1,382,018	7	1,665,800	7	1,949,582	7	2,233,363	7	2,517,145	7	2,800,927
8	249,7281	8	533,510	8	817,292	8	1,101,074	8	1,384,836	8	1,668,638	8	1,952,419	8	2,236,201	8	2,519,983	8	2,803,765
9	252,5659	9	536,348	9	820,130	9	1,103,912	9	1,387,693	9	1,671,475	9	1,955,257	9	2,239,039	9	2,522,821	9	2,806,603
90	255,4037	190	539,186	290	822,967	390	1,106,749	490	1,390,531	590	1,674,313	690	1,958,095	790	2,241,877	890	2,525,659	990	2,809,441
1	258,2415	1	542,023	1	825,865	1	1,109,587	1	1,393,369	1	1,677,511	1	1,960,933	1	2,244,715	1	2,528,497	1	2,812,279
2	261,7039	2	544,861	2	828,643	2	1,112,425	2	1,396,207	2	1,682,827	2	1,963,889	2	2,247,533	2	2,531,334	2	2,817,354
3	263,9197	3	547,699	3	831,481	3	1,115,163	3	1,399,045	3	1,682,527	3	1,966,609	3	2,250,390	3	2,534,172	3	2,817,354
4	266,7550	4	550,537	4	834,319	4	1,118,101	4	1,401,883	4	1,685,664	4	1,969,446	4	2,248,228	4	2,537,010	4	2,820,792
5	269,5928	5	553,375	5	837,157	5	1,120,938	5	1,404,720	5	1,688,502	5	1,972,284	5	2,256,065	5	2,539,848	5	2,823,630
6	272,4306	6	556,213	6	842,823	6	1,123,776	6	1,407,558	6	1,691,440	6	1,975,122	6	2,258,904	6	2,542,686	6	2,826,468
7	275,6634	7	559,050	7	846,832	7	1,126,614	7	1,410,396	7	1,694,178	7	1,977,960	7	2,261,524	7	2,545,524	7	2,829,143
8	278,1063	8	561,888	8	845,670	8	1,129,452	8	1,413,234	8	1,697,016	8	1,980,798	8	2,264,579	8	2,548,361	8	2,832,143
9	280,9441	9	564,726	9	848,598	9	1,132,290	9	1,416,072	9	1,699,854	9	1,983,635	9	2,267,417	9	2,551,199	9	2,834,981

**MASS—AVOIRDUPOIS POUNDS TO KILOGRAMS**

[Reduction factor: 1 avoirdupois pound=0.453592477 kilogram]

| Pounds Kilos |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 0 0          | 45.35924     | 200          | 90.71849     | 300          | 136.07773    | 400          | 181.43697    | 500          | 226.79621    | 600          | 272.15546    |
| 1 1          | 45.35924     | 1            | 91.17288     | 1            | 136.33132    | 1            | 181.80056    | 1            | 227.24981    | 1            | 272.69095    |
| 2 2          | 46.26643     | 2            | 91.62567     | 2            | 137.98191    | 2            | 182.34416    | 2            | 227.70340    | 2            | 273.06264    |
| 3 3          | 46.72002     | 3            | 92.07926     | 3            | 137.43855    | 3            | 182.79715    | 3            | 228.15689    | 3            | 273.51625    |
| 4 4          | 47.17361     | 4            | 92.52868     | 4            | 137.89210    | 4            | 183.25134    | 4            | 228.61538    | 4            | 273.96983    |
| 5 5          | 47.62720     | 5            | 92.98645     | 5            | 138.34569    | 5            | 184.04118    | 5            | 229.64118    | 5            | 274.42342    |
| 6 6          | 48.08823     | 6            | 93.44004     | 6            | 138.74339    | 6            | 184.51853    | 6            | 229.51777    | 6            | 274.87701    |
| 7 7          | 3.17515      | 7            | 93.80363     | 7            | 139.25288    | 7            | 185.61212    | 7            | 229.97136    | 7            | 275.30360    |
| 8 8          | 3.63875      | 8            | 48.08798     | 8            | 139.70647    | 8            | 185.06571    | 8            | 230.42495    | 8            | 275.78420    |
| 9 9          | 4.08238      | 9            | 49.44157     | 9            | 94.80082     | 9            | 185.51930    | 9            | 230.87855    | 9            | 276.23779    |
| 10 10        | 49.89517     | 210          | 95.25441     | 310          | 140.61365    | 410          | 185.97290    | 510          | 231.33214    | 610          | 276.69138    |
| 11 11        | 50.34876     | 1            | 97.70800     | 1            | 141.06727    | 1            | 186.46449    | 1            | 231.78573    | 1            | 277.14497    |
| 12 12        | 50.80235     | 2            | 96.16159     | 2            | 141.52084    | 2            | 186.88008    | 2            | 232.33932    | 2            | 277.59857    |
| 13 13        | 51.25594     | 3            | 96.61519     | 3            | 141.97443    | 3            | 187.33367    | 3            | 232.69292    | 3            | 278.05216    |
| 14 14        | 51.70954     | 4            | 97.06878     | 4            | 142.42802    | 4            | 187.78727    | 4            | 233.14651    | 4            | 278.50575    |
| 15 15        | 52.16313     | 5            | 97.52237     | 5            | 142.88161    | 5            | 188.24086    | 5            | 233.60010    | 5            | 278.95934    |
| 16 16        | 52.57448     | 6            | 52.61672     | 6            | 143.79596    | 6            | 188.73521    | 6            | 234.05369    | 6            | 279.41294    |
| 17 17        | 53.07031     | 7            | 98.42956     | 7            | 143.78880    | 7            | 189.14804    | 7            | 234.50729    | 7            | 279.86653    |
| 18 18        | 53.52391     | 8            | 53.12381     | 8            | 98.88315     | 8            | 144.24239    | 8            | 189.60163    | 8            | 280.32012    |
| 19 19        | 53.97750     | 9            | 8.61826      | 9            | 99.33674     | 9            | 144.69398    | 9            | 190.05523    | 9            | 235.41447    |
| 20 20        | 9.07185      | 120          | 54.43109     | 220          | 99.79033     | 320          | 145.14958    | 420          | 190.50882    | 520          | 235.86806    |
| 21 21        | 9.52544      | 1            | 54.88468     | 1            | 100.24393    | 1            | 145.60331    | 1            | 190.96241    | 1            | 236.31265    |
| 22 22        | 9.97903      | 2            | 55.33828     | 2            | 100.69752    | 2            | 146.05676    | 2            | 191.41600    | 2            | 236.77549    |
| 23 23        | 10.43263     | 3            | 55.79187     | 3            | 101.15111    | 3            | 146.10303    | 3            | 191.86960    | 3            | 237.22884    |
| 24 24        | 10.88622     | 4            | 56.24546     | 4            | 101.60470    | 4            | 146.96395    | 4            | 192.32319    | 4            | 237.68243    |
| 25 25        | 56.69509     | 5            | 11.33981     | 5            | 102.05830    | 5            | 147.47154    | 5            | 192.77678    | 5            | 238.13602    |
| 26 26        | 6.717340     | 6            | 57.15265     | 6            | 102.51189    | 6            | 147.87133    | 6            | 193.23037    | 6            | 238.49486    |
| 27 27        | 12.24700     | 7            | 57.50624     | 7            | 102.95458    | 7            | 148.32472    | 7            | 193.63497    | 7            | 239.04321    |
| 28 28        | 12.70059     | 8            | 58.05983     | 8            | 103.41907    | 8            | 148.77832    | 8            | 194.13736    | 8            | 239.49680    |
| 29 29        | 13.15418     | 9            | 58.51342     | 9            | 103.87267    | 9            | 149.23191    | 9            | 194.59115    | 9            | 239.95039    |
| 30 30        | 13.60777     | 130          | 58.96702     | 230          | 104.32626    | 330          | 149.68550    | 430          | 195.04474    | 530          | 240.40399    |
| 31 31        | 59.42061     | 1            | 105.13909    | 1            | 150.13909    | 1            | 196.07855    | 1            | 240.85758    | 1            | 245.16282    |
| 32 32        | 59.41596     | 2            | 105.23344    | 2            | 150.59292    | 2            | 195.51913    | 2            | 241.31117    | 2            | 246.67041    |
| 33 33        | 59.86835     | 3            | 60.32739     | 3            | 105.68704    | 3            | 151.04682    | 3            | 241.76476    | 3            | 247.12041    |
| 34 34        | 45.44224     | 4            | 60.78139     | 4            | 106.14063    | 4            | 151.49987    | 4            | 242.21836    | 4            | 247.57760    |
| 35 35        | 58.87573     | 5            | 61.23948     | 5            | 106.59422    | 5            | 151.55346    | 5            | 242.67195    | 5            | 248.03119    |
| 36 36        | 61.68857     | 6            | 61.73233     | 6            | 107.40706    | 6            | 152.40781    | 6            | 243.12554    | 6            | 248.48478    |
| 37 37        | 62.14216     | 7            | 62.14216     | 7            | 107.50141    | 7            | 152.86065    | 7            | 243.21989    | 7            | 248.93338    |
| 38 38        | 62.23651     | 8            | 62.59572     | 8            | 107.95500    | 8            | 153.31424    | 8            | 244.03273    | 8            | 249.31917    |
| 39 39        | 63.04935     | 9            | 108.40859    | 9            | 153.76783    | 9            | 199.12708    | 9            | 244.48632    | 9            | 249.84556    |
| 40 40        | 63.50294     | 240          | 108.86218    | 340          | 154.22143    | 440          | 199.58067    | 540          | 244.03991    | 640          | 240.29915    |
| 41 41        | 63.55653     | 1            | 109.31578    | 1            | 154.67502    | 1            | 200.03426    | 1            | 245.39330    | 1            | 249.52727    |
| 42 42        | 64.41032     | 2            | 110.76937    | 2            | 155.12861    | 2            | 200.48780    | 2            | 245.84710    | 2            | 249.60634    |
| 43 43        | 64.86375     | 3            | 110.22296    | 3            | 155.38203    | 3            | 200.94145    | 3            | 246.30069    | 3            | 249.65939    |
| 44 44        | 65.31731     | 4            | 110.76755    | 4            | 155.33808    | 4            | 201.39504    | 4            | 246.75128    | 4            | 249.11352    |
| 45 45        | 65.77993     | 5            | 111.13014    | 5            | 156.48938    | 5            | 201.86623    | 5            | 247.20787    | 5            | 249.56712    |
| 46 46        | 66.22449     | 6            | 111.58374    | 6            | 156.94298    | 6            | 202.30663    | 6            | 247.66147    | 6            | 249.72023    |
| 47 47        | 66.78059     | 7            | 112.03733    | 7            | 157.39657    | 7            | 202.75852    | 7            | 248.11506    | 7            | 249.74730    |
| 48 48        | 67.13168     | 8            | 112.49092    | 8            | 157.50161    | 8            | 203.20941    | 8            | 248.56865    | 8            | 249.22789    |
| 49 49        | 67.58327     | 9            | 112.94451    | 9            | 158.30376    | 9            | 203.66330    | 9            | 249.02224    | 9            | 249.38149    |

0 0	408.23318	900	362.87394	1	363.32753
1 1	408.68678	8	366.80568	8	411.86192
2 2	409.59396	9	366.95257	9	412.31552
3 3	410.04755	9	367.40909	9	412.76911
4 4	410.51015	6	365.59550	6	410.95474
5 5	411.40833	7	366.94090	7	410.80833
6 6	411.86192	8	366.94090	8	411.86192
7 7	412.31552	9	366.95257	9	412.31552

8 8	412.76911	9	367.86336	1	368.31075
9 9	413.22270	2	368.12193	2	413.67626
10 10	413.67626	3	368.12193	3	414.12989
11 11	414.12989	4	368.12193	4	414.58348
12 12	414.58348	5	369.67883	5	415.03707
13 13	415.04966	6	369.67883	6	415.49066
14 14	415.49066	7	370.38501	7	415.94246
15 15	415.94246	8	370.38501	8	416.38737

16 16	416.38737	9	371.49220	9	416.85144
17 17	416.85144	1	372.39338	1	417.30563
18 18	417.30563	2	372.39338	2	417.75863
19 19	417.75863	3	372.85298	3	418.21222
20 20	418.21222	4	372.85298	4	418.66581
21 21	418.66581	5	373.30537	5	419.11940
22 22	419.11940	6	373.76016	6	419.57300
23 23	419.57300	7	374.21375	7	420.02659
24 24	420.02659	8	374.66735	8	420.48018
25 25	420.48018	9	375.12994	9	420.93377

26 26	420.93377	1	375.77097	1	421.84996
27 27	421.84996	2	376.33131	2	422.29455
28 28	422.29455	3	376.33131	3	422.74814
29 29	422.74814	4	377.38809	4	423.20174
30 30	423.20174	5	377.38809	5	423.65533
31 31	423.65533	6	378.29608	6	424.10892
32 32	424.10892	7	378.74668	7	424.56251
33 33	424.56251	8	379.20327	8	425.01610
34 34	425.01610	9	379.65866	9	425.92329

35 35	425.92329	1	380.36405	1	426.37688
36 36	426.37688	2	381.01764	2	426.83047
37 37	426.83047	3	381.47123	3	427.28407
38 38	427.28407	4	382.33201	4	428.19125
39 39	428.19125	5	382.33201	5	428.6484
40 40	428.6484	6	383.28650	6	429.09844
41 41	429.09844	7	383.73919	7	429.55203
42 42	429.55203	8	384.64538	8	430.05562
43 43	430.05562	9	385.09977	9	430.45921



# MASS—KILOGRAMS TO AVOIRDUPOIS POUNDS

[Reduction factor: 1 Kilogram = 2.20462341 Avoirdupois pounds]

Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds
0	0	440.9245	200	881.0489	400	600	1,102.3112	600	1,322.7734	700	1,543.2356	800	1,763.6879
1	2,2046	100	220.46629	300	661.3867	400	884.0536	1	1,104.5158	1	1,324.9780	1	1,545.4403
2	4,4092	1	443.1291	1	663.5913	1	884.0536	2	1,106.7204	2	1,327.1826	2	1,547.6449
3	6,6139	2	224.8715	2	445.3337	2	665.7959	3	888.4628	3	1,108.9250	3	1,329.3873
4	8,8185	3	227.0761	3	447.5383	3	668.0096	4	890.6674	4	1,111.1297	4	1,331.5919
5	11.0231	4	229.2807	4	449.7430	4	670.2052	5	892.0720	5	1,113.3343	5	1,334.5965
6	13.2277	5	231.4853	5	451.9476	5	672.6744	6	895.0767	6	1,115.5389	6	1,336.0011
7	15.4324	6	233.6900	6	454.1522	6	674.6144	7	895.6767	7	1,117.7435	7	1,336.2058
8	17.6370	7	235.8946	7	456.3568	7	676.8191	8	897.2813	8	1,119.9481	8	1,340.4104
9	19.8416	8	238.0992	8	458.5561	8	678.0728	9	901.6905	9	1,122.1528	9	1,342.6150
10	22.0462	9	240.3038	9	460.7661	9	681.2283	10	903.8952	10	1,124.3574	10	1,344.8196
11	24.2508	1	244.9131	1	465.1753	1	685.6375	1	904.0698	1	1,126.5262	1	1,347.0243
12	26.4555	2	246.9171	2	467.3799	2	687.8426	2	908.3044	2	1,128.7666	2	1,349.2289
13	28.6601	3	249.1223	3	469.5846	3	690.0468	3	910.5090	3	1,130.9713	3	1,351.4335
14	30.8647	4	251.3269	4	471.7892	4	692.2514	4	912.7136	4	1,133.1759	4	1,353.6381
15	33.0693	5	253.3216	5	473.9938	5	694.4560	5	914.9183	5	1,135.3805	5	1,355.8427
16	35.2740	6	255.7362	6	476.1984	6	696.6607	6	917.1229	6	1,137.5851	6	1,358.0474
17	37.4786	7	257.9408	7	478.4030	7	698.8653	7	919.3275	7	1,139.7898	7	1,360.2520
18	39.6832	8	260.1454	8	480.6077	8	701.0999	8	921.5321	8	1,141.9844	8	1,362.4566
19	41.8878	9	262.3301	9	482.8123	9	703.2745	9	921.7468	9	1,144.1990	9	1,364.6612
20	44.0924	10	264.5347	10	485.0219	10	705.4791	10	925.9414	10	1,146.4036	10	1,366.6559
21	46.2971	1	266.5793	1	487.2215	1	707.6338	1	928.1460	1	1,148.6082	1	1,369.0705
22	48.5017	2	268.9639	2	489.4262	2	709.8884	2	930.5036	2	1,150.8129	2	1,371.2751
23	50.7063	3	271.1685	3	491.6308	3	712.0520	3	932.5553	3	1,153.0175	3	1,373.4797
24	52.9109	4	273.3732	4	493.8354	4	714.2676	4	934.7599	4	1,155.2221	4	1,375.6843
25	55.1156	5	275.5778	5	496.0420	5	716.5023	5	936.3645	5	1,157.4267	5	1,377.8890
26	57.3202	6	277.7824	6	498.2446	6	718.7606	6	939.1691	6	1,159.6314	6	1,380.6936
27	59.5248	7	279.9870	7	500.4493	7	720.9115	7	941.3737	7	1,161.8360	7	1,382.2982
28	61.7294	8	282.1917	8	502.6539	8	723.1161	8	943.5784	8	1,164.0406	8	1,384.5028
29	63.9340	9	284.3963	9	504.8585	9	725.3208	9	945.7830	9	1,166.2452	9	1,386.7075
30	66.1387	10	286.6009	10	507.0631	10	727.5524	10	947.9876	10	1,168.4498	10	1,388.9121
31	68.3433	1	288.8055	1	509.2724	1	729.7300	1	950.1922	1	1,170.6345	1	1,392.1651
32	70.5479	2	291.0101	2	511.4724	2	731.9346	2	952.3969	2	1,172.8391	2	1,393.3213
33	72.7525	3	293.2148	3	513.6770	3	734.1392	3	954.6015	3	1,175.0637	3	1,395.5259
34	74.9572	4	295.4194	4	515.8816	4	736.3439	4	956.8061	4	1,177.2683	4	1,397.7306
35	77.1618	5	297.6240	5	518.0863	5	738.5485	5	959.0107	5	1,179.4730	5	1,399.9352
36	79.3664	6	299.8286	6	520.2909	6	740.7331	6	961.2153	6	1,181.6776	6	1,402.1398
37	81.5710	7	302.0333	7	522.4955	7	742.9377	7	963.4200	7	1,183.8822	7	1,404.3444
38	83.7756	8	304.2379	8	524.7001	8	745.1624	8	965.6246	8	1,186.0868	8	1,406.5491
39	85.9803	9	306.4425	9	526.9047	9	747.3670	9	967.8292	9	1,188.2914	9	1,408.7537
40	88.189	140	308.6471	240	529.1094	440	970.0338	540	1,190.4961	640	1,410.9583	740	1,631.4205
41	90.3895	1	310.8518	1	531.1340	1	751.7762	1	972.2385	1	1,192.7007	1	1,413.1629
42	92.5941	2	313.0564	2	533.1586	2	753.9805	2	974.4431	2	1,194.9053	2	1,415.3675
43	94.7985	3	315.2610	3	535.7232	3	756.1657	3	976.6477	3	1,197.1099	3	1,417.5722
44	97.0034	4	317.4656	4	537.9279	4	758.3901	4	978.8523	4	1,199.3146	4	1,419.7768
45	99.2080	5	319.6702	5	540.1325	5	760.5947	5	981.0569	5	1,201.5192	5	1,421.9614
46	101.4126	6	321.8749	6	542.3371	6	762.7993	6	983.3616	6	1,203.7238	6	1,424.1860
47	103.6173	7	324.0795	7	544.5417	7	765.0040	7	987.6662	7	1,205.9384	7	1,426.3907
48	105.8219	8	326.2841	8	546.7463	8	767.6708	8	987.1620	8	1,208.1330	8	1,428.5575
49	108.0265	9	328.4887	9	548.9510	9	769.4132	9	988.8754	9	1,210.3377	9	1,430.7999

80

Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds
0	0	100	220.46629	200	440.9245	300	661.3867	400	881.0489	500	1,102.3112	600	1,322.7734
1	2,2046	100	222.6629	200	440.9245	300	661.3867	400	881.0489	500	1,102.3112	600	1,322.7734
2	4,4092	1	224.8715	2	445.3337	2	665.7959	3	888.4628	3	1,106.7204	4	1,327.1826
3	6,6139	3	227.0761	4	447.5383	3	668.0096	4	890.6674	4	1,111.1297	5	1,331.5919
4	8,8185	4	229.2807	5	449.7430	4	670.2052	5	892.0720	5	1,113.3343	6	1,334.5965
5	11.0231	5	231.4853	6	451.9476	5	672.6744	6	895.0767	6	1,115.5389	7	1,336.0011
6	13.2277	6	233.6900	7	454.1522	6	674.6144	7	895.6767	7	1,117.7435	8	1,336.2058
7	15.4324	7	235.8946	8	456.3568	7	676.8191	8	897.2813	8	1,119.9481	9	1,340.4104
8	17.6370	8	238.0992	9	458.5561	8	678.0728	9	901.6905	9	1,122.1528	9	1,342.6150
9	19.8416	9	240.3038	10	460.7661	9	681.2283	10	903.8952	10	1,124.3574	10	1,344.8196
10	22.0462	110	242.5085	210	462.9707	110	683.4329	210	904.0698	610	1,124.3574	610	1,344.8196
11	24.2508	1	244.9131	2	467.3799	2	687.8426	3	908.3044	1	1,126.5262	1	1,347.0243
12	26.4555	2	246.9171	3	469.5846	3	690.0468	4	910.5090	2	1,128.7666	2	1,349.2289
13	28.6601	3	249.1223	4	471.7892	4	692.2514	5	912.7136	3	1,130.9713	3	1,351.4335
14	30.8647	4	251.3269	5	473.9938	5	694.4560	6	914.9183	4	1,133.1759	4	1,353.6381
15	33.0693	5	253.3216	6	476.1984	6	696.6607	7	917.1229	5	1,135.3805	5	1,355.8427
16	35.2740	6	255.7362	7	478.4030	7	698.8653	8	919.3275	6	1,137.5851	6	1,358.0474
17	37.4786	7	257.9408	8	480.6077	8	701.0999	9	921.5321	7	1,141.9844	8	1,362.4566
18	39.6832	8	260.1454	9	482.8123	9	703.2745	9	921.7468	8	1,144.1990	9	1,364.6612
19	41.8878	9	262.3301	9	482.8123	9	703.2745	9	921.7468	9	1,144.1990	9	1,364.6612
20	44.0924	120	264.5347	240	485.0219	320	705.4791	420	925.9414	620	1,146.4036	720	1,366.6559
21	46.2971	1	266.5793	1	487.2215	1	707.6338	1	928.1460	1	1,148.6082	1	1,369.0705
22	48.5017	2	268.9639	2	489.4262	2	709.8884	2	930.5036	2	1,150.8129	2	1,371.2751
23	50.7063	3	271.1685	3	491.6308	3	712.0520	3	932.5553	3	1,153.0175	3	1,373.4797
24	52.9109	4	273.3732	4	493.8354	4	714.2676	4	934.7599	4	1,155.2221	4	1,375.6843
25	55.1156	5	275.5778	5	496.0420	5	716.5023	5	936.3645	5	1,157.4267	5	1,377.8890
26	57.3202	6	277.7824	6	498.2446	6	718.7606	6	939.1691	6	1,159.6314	6	1,380.6936
27	59.5248	7	279.9870	7	500.4493	7	720.9115	7	941.3737	7	1,161.8360	7	1,382.2982
28	61.7294	8	282.1917	8	502.6539	8	723.1161	8	943.5784	8	1,164.0406	8	1,384.5028
29	63.9340	9	284.3963	9	504.8585	9	725.3208	9	945.7830	9	1,166.2452	9	1,386.7075
30	66.1387	130	286.6009	230									

50	110.2311	2950	551.1556	992.0801	550	771.6178	450	994.2847	550	1.212.5423	650	1.433.0045	750	1.653.4668	850	1.873.9290	950	2.094.3912
1	112.4357	2	553.3602	1	1.14.7469	1	1.14.7469	1	1.655.6714	1	1.876.1336	1	1.876.1336	1	2.096.5958	1	2.096.5958	
2	114.6404	2	555.5648	2	1.216.9515	2	1.435.2091	2	1.657.8760	2	1.878.3382	2	1.878.3382	2	2.098.8005	2	2.098.8005	
3	116.8450	3	557.7695	3	1.219.1562	3	1.437.1388	3	1.659.1684	3	1.880.5429	3	1.880.5429	3	2.101.0051	3	2.101.0051	
4	119.0496	4	559.9741	4	1.000.8885	4	1.221.3608	4	1.662.8230	4	1.882.7475	4	1.882.7475	4	2.103.2097	4	2.103.2097	
5	121.1502	5	562.1787	5	1.003.1032	5	1.223.5554	5	1.664.4899	5	1.884.5251	5	1.884.5251	5	2.105.4143	5	2.105.4143	
6	123.4589	6	564.3833	6	1.005.3078	6	1.225.7700	6	1.666.6945	6	1.887.1567	6	1.887.1567	6	2.107.6190	6	2.107.6190	
7	125.6635	7	566.5879	7	1.007.5124	7	1.227.9746	7	1.668.8891	7	1.889.3613	7	1.889.3613	7	2.109.8236	7	2.109.8236	
8	127.8681	8	568.7926	8	1.009.7170	8	1.230.1793	8	1.671.1037	8	1.891.5660	8	1.891.5660	8	2.112.0282	8	2.112.0282	
9	130.0727	9	570.9972	9	1.011.9217	9	1.232.3839	9	1.673.3084	9	1.893.7706	9	1.893.7706	9	2.114.2328	9	2.114.2328	
60	132.2773	160	352.7996	260	1.014.1263	560	1.234.5885	660	1.455.0507	760	1.675.5130	860	1.895.9752	960	2.116.4374	1	2.116.4374	
1	134.4820	2	354.9442	1	575.4064	1	795.8687	1	1.016.3305	1	1.236.7931	1	1.457.5534	1	1.677.7176	1	1.677.7176	
2	136.6866	2	357.1488	2	577.6111	2	798.0733	2	1.018.5335	2	1.238.9978	2	1.459.4600	2	1.679.3845	2	1.679.3845	
3	138.8912	3	359.3334	3	579.8157	3	800.2779	3	1.021.2024	3	1.241.2024	3	1.461.6616	3	1.902.5891	3	2.123.0513	
4	141.0938	4	361.5581	4	582.0203	4	802.4825	4	1.024.4070	4	1.243.4070	4	1.463.8692	4	1.904.7937	4	2.125.2559	
5	143.3005	5	363.7627	5	584.2249	5	804.6872	5	1.005.1494	5	1.245.6116	5	1.466.0739	5	1.906.9983	5	2.127.4606	
6	145.5051	6	365.9673	6	586.4295	6	806.8919	6	1.027.8162	6	1.248.8785	6	1.688.7407	6	2.129.6652	6	2.129.6652	
7	147.7997	7	368.1719	7	588.6342	7	809.0964	7	1.029.5586	7	1.250.0209	7	1.470.4831	7	1.911.4076	7	2.131.8698	
8	149.9143	8	370.3766	8	590.8388	8	810.1301	8	1.029.5586	8	1.252.2255	8	1.470.6787	8	1.914.0744	8	2.134.0744	
9	152.1189	9	372.5812	9	593.0434	9	813.5056	9	1.023.9679	9	1.254.4301	9	1.474.8923	9	1.915.3166	9	2.136.2790	
70	154.3236	170	374.7858	270	595.2480	370	815.7103	470	1.036.1725	570	1.256.6347	670	1.477.0970	770	1.697.5592	870	1.918.4214	
1	156.5282	2	378.1328	2	599.1950	1	597.4527	1	1.038.3771	1	1.258.8394	1	1.479.3016	1	1.699.7638	1	1.920.2261	
3	160.9374	3	381.3997	3	601.8619	3	822.3241	2	1.040.5817	2	1.261.0440	2	1.481.5062	2	1.701.1731	2	1.922.4307	
4	163.1421	4	383.6043	4	604.0665	4	824.5288	4	1.044.9910	4	1.265.4532	4	1.485.9155	4	1.706.3777	4	1.926.8399	
5	165.4367	5	385.8089	5	606.2711	5	826.7334	5	1.047.1956	5	1.267.6578	5	1.488.1201	5	1.708.5823	5	1.929.0445	
6	167.5113	6	388.0135	6	608.4758	6	828.9802	6	1.049.4002	6	1.269.8625	6	1.490.8247	6	1.710.7869	6	1.931.4542	
7	169.7559	7	390.2182	7	610.6804	7	1.051.6049	7	1.274.0271	7	1.492.2933	7	1.712.9916	7	1.933.4538	7	2.153.9160	
8	171.9605	8	392.4228	8	612.8850	8	833.3472	8	1.053.8095	8	1.274.2717	8	1.494.7339	8	1.935.5584	8	2.156.1206	
9	174.1632	9	394.6274	9	615.0896	9	835.5519	9	1.056.0141	9	1.276.4763	9	1.496.9386	9	1.937.3630	9	2.158.3253	
80	176.3968	180	396.8320	280	617.2943	380	837.7565	480	1.058.2187	580	1.278.6810	680	1.499.1432	780	1.719.6054	880	1.940.0677	
1	178.5744	1	399.0366	1	619.9611	2	840.4233	2	1.050.8852	2	1.283.0952	2	1.501.4478	2	1.721.8100	2	1.942.2723	
2	180.7790	2	401.2413	2	621.7035	2	842.1657	2	1.052.6280	2	1.283.0952	2	1.503.5254	2	1.724.0147	2	1.942.6799	
3	182.9837	3	403.4459	3	623.9081	3	844.3704	3	1.054.8236	3	1.285.2948	3	1.505.7571	3	1.726.2193	3	1.946.5815	
4	185.1883	4	405.6505	4	626.1127	4	846.5570	4	1.057.0372	4	1.287.4994	4	1.507.9617	4	1.728.4239	4	1.948.8861	
5	187.3929	5	407.8551	5	628.3174	5	848.7796	5	1.059.2418	5	1.289.7041	5	1.510.1663	5	1.730.6285	5	1.951.9098	
6	189.5975	6	410.0598	6	630.5220	6	850.9842	6	1.071.4465	6	1.291.9087	6	1.512.5769	6	1.732.8332	6	1.953.2354	
7	191.8021	7	412.2644	7	632.7266	7	853.1888	7	1.073.6511	7	1.294.1133	7	1.514.5757	7	1.735.0378	7	1.955.5000	
8	194.0068	8	414.4690	8	634.9312	8	855.3935	8	1.075.8557	8	1.296.3179	8	1.516.7802	8	1.737.2424	8	1.957.0476	
9	196.2114	9	416.6736	9	637.1359	9	857.5981	9	1.078.0633	9	1.298.5226	9	1.518.9848	9	1.739.4470	9	1.959.9093	
90	198.4160	190	418.8782	290	639.3405	390	859.8027	490	1.080.2649	590	1.300.7272	690	1.521.1894	790	1.741.6516	890	1.962.1139	
1	200.6206	1	421.0829	1	641.5451	1	862.0073	1	1.082.4696	1	1.302.9318	1	1.523.3940	1	1.743.8663	1	1.964.5165	
2	202.8233	2	423.2875	2	643.7497	2	864.2149	2	1.084.6747	2	1.305.1364	2	1.525.9897	2	1.746.0609	2	1.966.5231	
3	205.0299	3	425.4921	3	645.9543	3	866.4166	3	1.086.8788	3	1.307.3410	3	1.527.8033	3	1.748.2655	3	1.968.7278	
4	207.2345	4	427.6967	4	648.1590	4	868.6212	4	1.089.8834	4	1.309.5457	4	1.530.0079	4	1.750.4701	4	1.970.9324	
5	209.4391	5	429.9014	5	650.3636	5	870.8258	5	1.091.2881	5	1.311.7503	5	1.532.2125	5	1.752.6748	5	1.973.3707	
6	211.6437	6	432.1060	6	652.5682	6	873.0304	6	1.093.4927	6	1.313.9459	6	1.534.1711	6	1.754.8794	6	1.975.3416	
7	213.8484	7	434.3106	7	654.7728	7	877.2351	7	1.095.6973	7	1.316.1595	7	1.535.7746	7	1.757.0840	7	1.977.5462	
8	216.0530	8	436.5152	8	656.9775	8	877.4397	8	1.097.9019	8	1.318.3642	8	1.538.8264	8	1.759.2886	8	1.978.0085	
9	218.2576	9	438.7198	9	659.1821	9	879.6443	9	1.101.1065	9	1.320.5688	9	1,541.0310	9	1,761.4933	9	1,981.5555	

## X. METRIC AND ENGLISH DISTANCE EQUIVALENTS FOR ATHLETIC EVENTS (TRACK AND FIELD)

### 1. METRIC UNITS IN ATHLETICS

On November 22, 1932 the Amateur Athletic Union took official action adopting metric distances for track events to be run in athletic meets held under the jurisdiction of that body.

It may be assumed that other athletic bodies will follow the lead of the AAU in adopting metric distances for track events, and also that the use of metric units may be extended to include field events.

With this thought in mind, the following tables of equivalents have been prepared to aid in conversions between the two systems of units and to assist those not entirely familiar with the metric system to gain a mental picture of the various distances expressed in meters.

*Explanation:* In table 1 are given the equivalent metric and English distances for the principal track events of both indoor and outdoor meets.

In table 2 are given the metric equivalents, expressed in meters, for all distances expressed in feet, inches, and binary fractions of an inch, up to 1 000 feet. This table may be conveniently used to find the metric equivalent of any distance, given to the nearest  $\frac{1}{8}$  inch, over a range sufficiently wide to include all field events by the simple process of breaking the distance down into convenient parts, finding the equivalent of each part, and adding them together to obtain the total equivalent.

In order to avoid confusion and possible error, it is recommended that all metric distances in track and field events be expressed in meters and decimal fractions of the meter.

*Example:* Find the metric equivalent of 242 feet,  $10\frac{1}{8}$  inches.

200 feet	=	60.960 meters
40 feet	=	12.192 meters
2 feet	=	.610 meter
10 inches	=	.254 meter
$\frac{1}{8}$ inch	=	.003 meter
<hr/>		
242 ft, $10\frac{1}{8}$ inches	=	74.019 meters

## 2. DISTANCE EQUIVALENTS

Basis  
 $1 \text{ meter} = 39.37 \text{ inches} = 3.2808 \text{ feet} = 1.0936 \text{ yards}$   
 $1 \text{ kilometer} = 1000 \text{ meters} = 0.621370 \text{ mile}$

TABLE 1.—*Track events*

Yards : Meters	Meters : Yards		
40 = 36.58	50 = 54.68		
50 = 45.72	60 = 65.62		
60 = 54.86	65 = 71.08		
70 = 64.01	80 = 87.49		
75 = 68.58	100 = 109.36		
100 = 91.44	110 = 120.30		
110 = 100.58	200 = 218.72		
120 = 109.73	300 = 328.08		
220 = 201.17	400 = 437.44		
300 = 274.32	500 = 546.81		
440 = 402.34 = $\frac{1}{4}$ mi	600 = 656.16		
600 = 548.64	800 = 874.89		
880 = 804.67 = $\frac{1}{2}$ mi	1 000 = 1 093.61		
1 000 = 914.40	1 500 = 1 640.42		
1 320 = 1 207.01 = $\frac{3}{4}$ mi	1 600 = 1 749.78		
Miles : Meters	Meters : Miles	Yards and inches	Miles (approx.)
1 = 1 609.3	2 000 = 1	427 8	1.24
2 = 3 218.7	2 400 = 1	864 24	1.49
3 = 4 828.0	3 000 = 1	1 520 30	1.86
4 = 6 437.4	3 200 = 1	1 739 20	1.99
5 = 8 046.7	5 000 = 3	188 2	3.11
6 = 9 656.1	6 000 = 3	1 281 24	3.73
7 = 11 265.4	10 000 = 6	376 4	6.21
8 = 12 874.8	15 000 = 9	564 6	9.32
9 = 14 484.1	20 000 = 12	752 8	12.43
10 = 16 093.5	25 000 = 15	940 10	15.53
15 = 24 140.2	30 000 = 18	1 128 12	18.64
20 = 32 186.9	50 000 = 31	120 20	31.07
25 = 40 233.7			
26 mi and 385 yd = 42 195.1			

TABLE 2.—*Field events*

Feet : Meters	Inches : Meter
1 = 0.305	1 = 0.025
2 = .610	2 = .051
3 = .914	3 = .076
4 = 1.219	4 = .102
5 = 1.524	5 = .127
6 = 1.829	6 = .152
7 = 2.134	7 = .178
8 = 2.438	8 = .203
9 = 2.743	9 = .229
10 = 3.048	10 = .254
20 = 6.096	11 = .279
30 = 9.144	12 = .305
40 = 12.192	Fractions of an inch : Meter
50 = 15.240	
60 = 18.288	
70 = 21.336	
80 = 24.384	
90 = 27.432	
100 = 30.480	
200 = 60.960	
300 = 91.440	
400 = 121.920	
500 = 152.400	
600 = 182.880	$\frac{1}{8}$ = 0.003
700 = 213.360	$\frac{1}{4}$ = .006
800 = 243.840	$\frac{3}{8}$ = .010
900 = 274.321	$\frac{1}{2}$ = .013
	$\frac{5}{8}$ = .016
	$\frac{3}{4}$ = .019
	$\frac{7}{8}$ = .022
	1 = .025

In deciding upon the number of decimal places to be retained in the accompanying tables consideration has been given to the precision of measurement of distance and of time as ordinarily carried out in connection with track and field events.

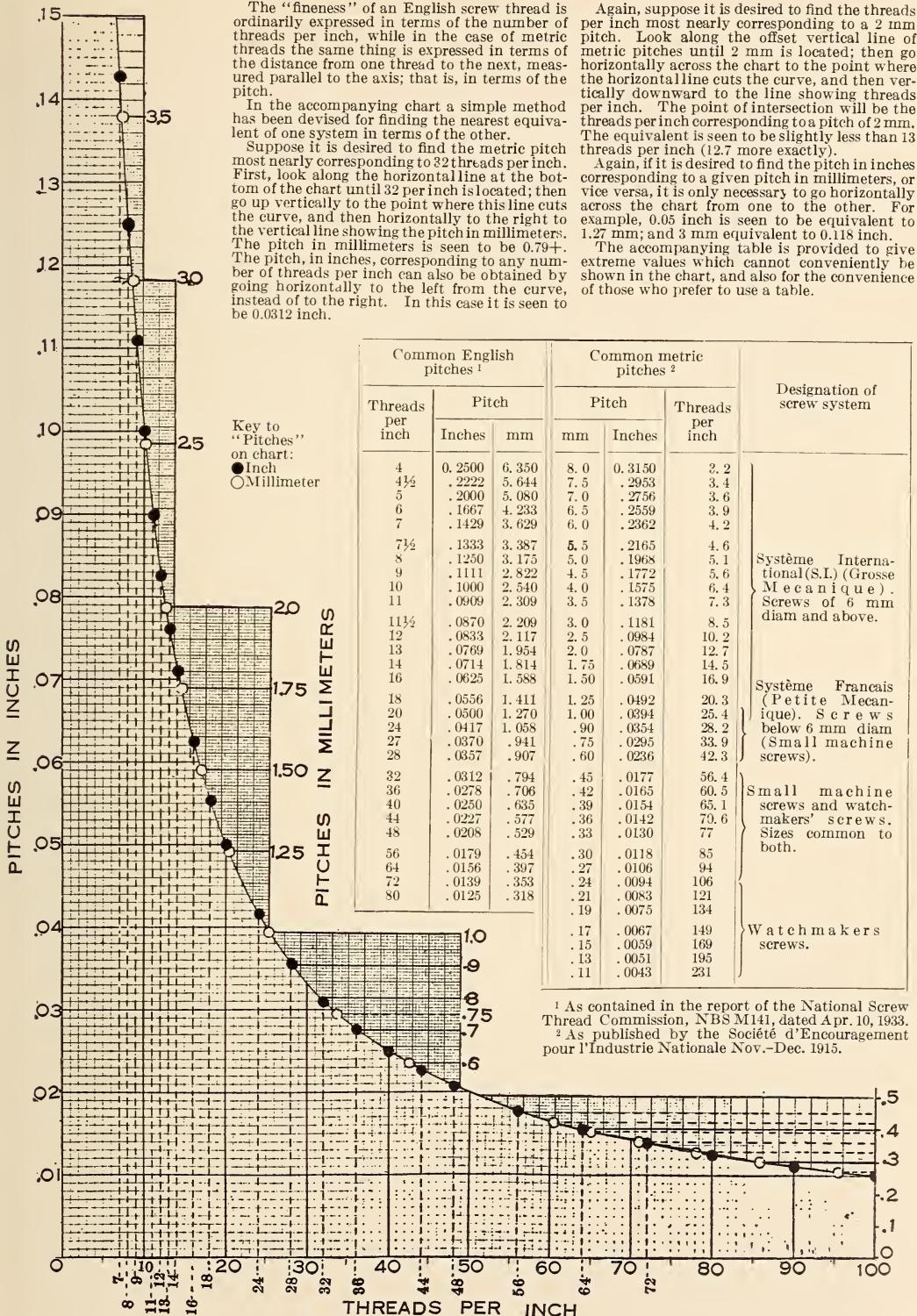
In field events it is customary to measure distances in feet and inches to the nearest  $\frac{1}{8}$  inch. This corresponds to about 3 millimeters, or 0.003 meter. In order not to sacrifice accuracy in converting these measured distances to meters the metric equivalents are given to the nearest 0.001 meter. This precision is ample, since the equivalents are more precise than the measurements themselves.

In the case of track events consideration has been given to the precision of measurement of both distance and time as ordinarily carried out in connection with these events. The time measurements are, in general, much the less precise of the two.

Time, when taken with stop watches, is ordinarily given to  $\frac{1}{5}$  second or to  $\frac{1}{10}$  second. When taken with electrical timing devices it may be given to  $\frac{1}{100}$  second.

In the dashes, where 1 second represents a distance of approximately 10 yards or 10 meters,  $\frac{1}{10}$  second represents roughly 1 yard or 1 meter, and  $\frac{1}{100}$  second a distance of  $\frac{1}{10}$  yard or  $\frac{1}{10}$  meter. Obviously, then, there is no need at present to give metric equivalents of distances more precisely than to the nearest  $\frac{1}{10}$  meter even when the most precise timing methods are used. For distances less than 1 mile they have, however, been given to the nearest  $\frac{1}{100}$  meter in order to allow for possible future improvement in timing equipment.

## XI. GRAPHIC COMPARISON CHART OF SCREW THREAD PITCHES<sup>a</sup>



<sup>1</sup> As contained in the report of the National Screw Thread Commission, NBS M141, dated Apr. 10, 1933.

<sup>2</sup> As published by the Société d'Encouragement pour l'Industrie Nationale Nov.-Dec. 1915.

Graphic comparison of screw thread pitches, showing the number of threads per inch and pitch in millimeters for both inch and millimeter systems.

<sup>a</sup> The above chart is also printed as a separate Miscellaneous Publication, M49, entitled Graphic Comparison of Screw Thread Pitches, by H. W. Bearce, and may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., Price 5 cents.



## XII. STATUS OF INTERNATIONAL METRIC SYSTEM IN THE UNITED STATES

### 1. CONSTITUTIONAL AUTHORITY TO FIX STANDARDS

"The Congress shall have power to \* \* \* fix the standard of weights and measures." (Constitution of the United States, Art. 1, sec. 8, par. 5.)

### 2. METRIC SYSTEM LEGALIZED

"It shall be lawful throughout the United States of America to employ the weights and measures of the metric system, \* \* \*." (Revised Statutes of the United States, sec. 3569.)

### 3. METRIC STANDARDS ADOPTED AS FUNDAMENTAL

"\* \* \* the office of weights and measures \* \* \* will in the future regard the international prototype meter and kilogram as fundamental standards, and the customary units, the yard and the pound, will be derived therefrom in accordance with the act of July 28, 1866." (Order approved by the Secretary of the Treasury, April 5, 1893.)

### 4. METRIC BALANCES FURNISHED CERTAIN POST OFFICES

"The Postmaster General shall furnish to the post offices exchanging mails with foreign countries, and to such other offices as he may deem expedient, postal balances denominated in grams of the metric system, fifteen grams of which shall be the equivalent, for postal purposes, of one-half ounce avoirdupois, and so on in progression." (Revised Statutes of the United States, sec. 3880.)

### 5. METRIC WEIGHTS USED FOR CERTAIN COINS

"\* \* \* the weight of the half-dollar shall be twelve grams and one-half of a gram; the quarter-dollar and the dime shall be, respectively, one-half and one-fifth of the weight of said half-dollar." (Revised Statutes of the United States, sec. 3513.)

### 6. CONGRESS PROVIDES METRIC STANDARDS FOR THE STATES OF THE UNION, LAND-GRANT AGRICULTURAL COLLEGES, AND THE SMITHSONIAN INSTITUTION

*"Be it resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Treasury be, and he is hereby, authorized and directed to furnish to each State, to be delivered to the governor thereof, one set of the standard weights and measures of the metric system for the use of the States, respectively."* (Joint resolution of Congress approved July 27, 1866.)

*"Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Treasury be, and he is hereby, directed to cause a complete set of all the weights and measures adopted as standards to be delivered to the governor of each State in the Union, for the use of agricultural colleges in the States, respectively, which have received a grant of lands from the United States, and also one set of the same for the use of the Smithsonian Institution: \* \* \*."* (Joint resolution of Congress, approved March 3, 1881.)

### 7. UNITED STATES JOINS IN ESTABLISHING INTERNATIONAL BUREAU OF WEIGHTS AND MEASURES

"The high contracting parties engage to establish and maintain, at their common expense, a scientific and permanent international bureau<sup>11</sup> of weights and measures, the location of which shall be at Paris." (Extract from convention of 1875, signed for the United States by the United States ambassador to France.)

---

<sup>11</sup> This bureau has the custody of the international standards of the metric system, to which all metric prototypes of the world are referred for verification. It was established and is maintained jointly by various governments.

## 8. CONGRESS ADOPTS THE METRIC UNITS FOR ELECTRICAL MEASURES

It was enacted by the Congress that the international electrical units shall be the legal units of electrical measure in the United States. These units were based on the centimeter-gram-second electromagnetic system of electrical units. (See Revised Statutes of the United States, Supplement, vol. 2, chap. 131, 1894.)

## 9. METRIC SYSTEM REQUIRED IN THE MEDICAL WORK OF THE WAR AND NAVY DEPARTMENTS AND THE U. S. PUBLIC HEALTH SERVICE OF THE TREASURY DEPARTMENT

- (a) "Pharmacy management. \* \* \*
- "(b) Records.

"1. In time of peace and, so far as practicable, in time of war all prescriptions will be written in the metric system. \* \* \*." (Army Regulations, 1929, Regulation 40-590, par. 18, sub.-par. 18-b (1).)

(b) "The metric system of weights and measures shall hereafter be employed in the Medical Department of the Navy." (Order approved by the Secretary of the Navy, April 15, 1878.)<sup>12</sup>

(c) "Officers shall, for all official, medical, and pharmacal purposes, make use of the metric system of weights and measures." (Regulations of the U. S. Public Health Service, 1931, sec. 856.)

## 10. METRIC CARAT ADOPTED AS UNIT OF WEIGHT FOR DIAMONDS AND OTHER PRECIOUS STONES

"Beginning July 1, 1913, the Bureau of Standards will recognize the international metric carat of 200 milligrams as the unit of weight for diamonds and other precious stones and will use this unit for the purposes of certification of all carat weights submitted to the bureau for test." (National Bureau of Standards, Circular C43, issued November 1, 1913.)

"On and after July 1, 1913, the unit of weight for imported diamonds, pearls, and other precious stones will be the metric carat of 200 milligrams.

"Collectors at ports now equipped with scales for weighing precious stones will make requisition for a new set of weights based upon such carat." (Treasury Department order, June 17, 1913, to collectors and other officers of the customs.)

## 11. METRIC SYSTEM OPTIONAL IN PUERTO RICO

"SECTION 1.—That the metric system of weights and measures and the imperial system customarily used in the United States, insofar as the same is described by this act, are hereby recognized and established in Porto Rico for use in all industrial and commercial transactions, \* \* \*."

(Act No. 135, approved, August 18, 1913.)

## 12. METRIC SYSTEM MADE THE LEGAL SYSTEM IN THE PHILIPPINE ISLANDS

"The weights and measures to be used throughout the Philippine Islands are those of the metric system, with the following units: \* \* \*

"The metric system of weights and measures, with its recognized scales, shall be used in all contracts, deeds, and other instruments publicly and officially attested, and in all official documents; and, except as hereinbelow provided, only weights and measures of the metric system shall be officially sealed and licensed.

"In the purchase and sale of manufactured lumber the English system of measures may be employed; and in ordering commodities or articles from abroad such

<sup>12</sup> The metric system is now used exclusively only in the medical prescription work of the Bureau of Medicine and Surgery.

weights and measures may be employed as are commonly used in the country to which the order is sent or from which the goods are shipped." (Administrative Code, 1917, vol. 2, Art. IX, p. 8, secs. 32 and 33.)

#### **13. RELATION BETWEEN INCHES AND MILLIMETERS ADOPTED BY AMERICAN STANDARDS ASSOCIATION**

For industrial purposes a simple relation between the inch and the millimeter has been adopted by the American Standards Association (ASA B48.1-1933), and by similar organizations in 15 other countries. This relation is

$$1 \text{ inch} = 25.4 \text{ millimeters (exactly)}$$

from which,  $1 \text{ yard} = 0.9144 \text{ meter (exactly)}$ .

The adoption of this relation by industry, for use in making conversions between inches and millimeters, has no effect upon the legal definition of the yard or of the meter.

#### **14. DISTANCES IN MULTIPLES OF METRIC UNITS ADOPTED FOR AMATEUR ATHLETIC UNION TRACK EVENTS**

On November 22, 1932, the Amateur Athletic Union took official action adopting metric distances for track events to be run in athletic meets held under the jurisdiction of that body. These metric distances given in this publication are also given in Letter Circular LC376, which may be obtained from the National Bureau of Standards.

### XIII. INDEX

Page		Page	
Abbreviations, list of accepted.....	7	Contents, table.....	III
Acre:		Conversion factor, ASA:	
Definition.....	4	Inches to millimeters.....	65
Equivalents in hectares, 1 to 9 units.....	12	Cord, definition.....	4
Equivalents in hectares, 1 to 999 units.....	36	Cubic measure, units ( <i>see also</i> under the name of each unit).....	4
Equivalents of bushels per acre in hectoliters per hectare, 1 to 9 units.....	8	Customary standards of length, temperature at which standard.....	6
Relation to other area units.....	8		
Amateur Athletic Union:			
Metric distances for track events.....	60	Decigram, definition.....	5
American Standards Association:		Deciliter, definition.....	4
Conversion factor, inches to millimeters.....	65	Decimal and common fractions of an inch and millimeters.....	15
Angstrom.....	3	Decimeter:	
Apothecaries' units ( <i>see also</i> under the name of each unit).....	3	Cubic:	
Are, definition.....	4	Definition.....	4
Area:		Relation to liter.....	4
Definition of units.....	3	Relation to other volume units.....	8
Fundamental units.....	3	Definition.....	3
Subsidiary units.....	3	Equivalent in inches.....	2
Athletic events, track distances in meters.....	60	Square, definition.....	4
Avoirdupois units of mass ( <i>see also</i> under the name of each unit).....	5	Dekagram, definition.....	5
Barrel:		Dekaliter:	
For apples:		Definition.....	4
Definition.....	5	Equivalents in United States pecks, 1 to 9 units.....	13
Volume in cubic inches.....	5	Relation to other capacity units.....	10
Board foot, definition.....	5	Dekameter:	
Bureau, International, of Weights and Measures.....	4	Cubic, definition.....	4
Bushel:		Definition.....	3
British:		Square, definition.....	4
Relation to United States bushel, approximate.....	2	Dram:	
United States:		Apothecaries':	
Definition.....	4	Definition.....	5
Equivalents in hectoliters, 1 to 9 units.....	13	Equivalents in grams, 1 to 9 units.....	13
Equivalents in hectoliters, 1 to 999 units.....	52	Relation to other units of mass.....	10
Heaped.....	4	Avoirdupois:	
Relation to other capacity units.....	10	Definition.....	5
Stricken or struck.....	4	Relation to other units of mass.....	10
Volume in cubic inches.....	2	Fluid:	
Capacity:		Definition.....	5
Definition of units.....	4	Equivalents in milliliters, 1 to 9 units.....	13
Fundamental units.....	4	Relation to other capacity units.....	8
Subsidiary units.....	4	Dry units of capacity ( <i>see also</i> under the name of each unit).....	4
Capacity measures:			
Coefficient of expansion.....	6	Electrical units, based on metric system.....	64
Distinction between, and units.....	6	Equivalents, fundamental.....	2
Material of which made.....	6	Equivalents. ( <i>See</i> names of units.).....	
Temperature at which standard.....	6	Fathom, definition.....	3
Carat:		Feet. ( <i>See</i> Foot.).....	
Metric, definition.....	5	Fluid units ( <i>see also</i> under the name of each unit).....	4
Old, in use in United States previous to July 1, 1913.....	5	Foot:	
Centare, definition.....	4	Cubic:	
Centigram, definition.....	5	Definition.....	4
Centiliter, definition.....	4	Equivalents in cubic meters, 1 to 9 units.....	12
Centimeter:		Equivalents in liters, 1 to 9 units.....	12
Cubic:		Relation to other volume units.....	8
Definition.....	4	Definition.....	3
Equivalents in cubic inches, 1 to 9 units.....	12	Equivalents in meters, 1 to 9 units.....	12
Relation to other volume units.....	8	Equivalents in meters, 1 to 999 units.....	28
Definition.....	3	Relation to other length units.....	8
Relation to other units.....	8	Square:	
Square:		Definition.....	4
Definition.....	4	Equivalents in square meters, 1 to 9 units.....	12
Equivalents in square inches, 1 to 9 units.....	12	Relation to other area units.....	8
Relation to other area units.....	8	Fractions of an inch and millimeters.....	15
Chain (Gunter's):		Furlong, definition.....	3
Definition.....	3	Gallon:	
Relation to other length units.....	8	British imperial:	
Square:		Relation to United States gallon, approximate.....	2
Definition.....	4	United States:	
Relation to other area units.....	8	Definition.....	4
Common fractions of an inch in decimals of an inch and millimeters.....	15	Equivalents in liters 1 to 9 units.....	13
Comparison of pounds and tons used in United States.....	14	Equivalents in liters 1 to 999 units.....	48
Comparison of screw thread pitches:		Relation to other capacity units.....	8
English and metric.....	62	Volume in cubic inches.....	4
Facing.....	(66)	Geographical mile. ( <i>See</i> Mile, geographical.).....	

Page		Page
	Law—Continued.	
5	July 28, 1866, legalizing use of metric system.....	63
5	Metric system in Puerto Rico.....	64
5	Metric system in Philippine Islands.....	64
5	Weights of certain coins in grams fixed by law.....	63
5	Legal status of metric system in United States.....	63
5	Length:	
13	Cable. ( <i>See Cable length.</i> )	3
10	Definition of units.....	3
5	Fundamental units.....	3
5	Subsidiary units.....	3
13	Link:	
13	Definition.....	3
13	Relation to other length units.....	8
13	Square:	
10	Definition.....	4
63	Relation to other area units.....	8
62	Liquid units ( <i>see also under the name of each unit.</i> ).....	4
3	Liquids:	
3	Sale of, by measure.....	6
3	Temperature of density determinations.....	6
12	Liter:	
12	Definition.....	4
38	Equivalents in cubic inches, 1 to 9 units.....	12
8	In cubic feet, 1 to 9 units.....	12
5	In United States dry quarts, 1 to 9 units.....	13
4	In United States dry pecks, 1 to 9 units.....	13
13	In United States liquid pints, 1 to 9 units.....	13
13	In United States liquid quarts, 1 to 9 units.....	13
13	In United States gallons, 1 to 9 units.....	13
13	In United States liquid quarts, 1 to 999 units.....	46
13	In United States gallons, 1 to 999 units.....	50
13	Relation to cubic decimeter.....	4
13	to other liquid capacity units.....	8
4	to other dry capacity units.....	8
3	Long hundredweight. <i>See Hundredweight, long.</i>	
3	Long ton. ( <i>See Ton, long.</i> )	
15	Mass:	
5	Definition of units.....	5
5	Fundamental units.....	5
5	Subsidiary units.....	5
5	Mendenhall Order.....	1
10	Meter:	
10	Cubic:	
3	Definition.....	4
12	Equivalents in cubic feet, 1 to 9 units.....	12
12	Equivalents in cubic yards, 1 to 9 units.....	12
15	Equivalents in cubic yards, 1 to 999 units.....	42
15	Relation to other volume units.....	8
15	Definition.....	3
15	Equivalents in feet, 1 to 9 units.....	12
29	Equivalents in feet, 1 to 999 units.....	30
8	Equivalents in rods, 1 to 9 units.....	12
8	Equivalents in yards, 1 to 9 units.....	12
4	Legal equivalent in inches.....	2
12	Relation to other length units.....	8
12	Square:	
4	Definition.....	3
4	Equivalents in square feet, 1 to 9 units.....	12
10	Equivalents in square yards, 1 to 9 units.....	12
8	Relation to other area units.....	8
8	Metric standards of length, temperature at which standard.....	6
4	Metric system:	
12	Abbreviations.....	6
8	Legalized.....	63
63	Prefixes.....	1
8	Statement of legal status.....	63
1	Units.....	1
1	Use in coinage.....	63
1	Use in medical work of War Department.....	64
1	Use in medical work of Navy Department.....	64
1	Use in Philippine Islands.....	64
1	Use in Puerto Rico.....	64
1	Use in U. S. Public Health Service.....	64
14	Metric ton. ( <i>See Ton, metric.</i> )	
10	Micron, definition.....	3
10	Mile:	
4	Geographical, definition.....	3
3	Nautical:	
12	Definition.....	3
34	Square:	
3	Definition.....	4
12	Equivalents in square kilometers, 1 to 9 units.....	12
3	Relation to other area units.....	8
3	Statute:	
3	Definition.....	3
3	Equivalents in kilometers, 1 to 9 units.....	12
63	Equivalents in kilometers, 1 to 999 units.....	32
64	Relation to other length units.....	8

Gill:	
Definition.....	8
Relation to other capacity units.....	8
Volume in cubic inches.....	8
Grain:	
Definition.....	10
Equivalents in grams, 1 to 9 units.....	10
Relation to other units of mass.....	10
Gram:	
Definition.....	5
Equivalents in grains, 1 to 9 units.....	5
Equivalents in apothecaries' drams, 1 to 9 units.....	5
Equivalents in troy ounces, 1 to 9 units.....	5
Equivalents in avoirdupois ounces, 1 to 9 units.....	5
Relation to other units of mass.....	5
Graphic chart of screw thread pitches.....	Facing
Hand, definition.....	
Hectare:	
Definition.....	3
Equivalents in acres, 1 to 9 units.....	3
Equivalents in acres, 1 to 999 units.....	3
Relation to other area units.....	3
Hectogram, definition.....	
Hectoliter:	
Definition.....	4
Equivalents in United States bushels, 1 to 9 units.....	4
Equivalents, 1 to 9 units:	
Of hectoliters per hectare in United States bushels per acre.....	4
Equivalents of hectoliters per hectare in bushels per acre, 1 to 9 units.....	4
Hectometer:	
Cubic definition.....	
Definition.....	3
Square, definition.....	3
Hundredths of an inch, equivalents of, in millimeters.....	
Hundredweight:	
Long, definition.....	
Short:	
Definition.....	5
Relation to other units of mass.....	5
Inch:	
Definition.....	3
Equivalents in millimeters, 1 to 9 units.....	12
Equivalents of common fractions of, in decimals of an inch.....	12
Equivalents of common fractions of, in millimeters.....	15
Equivalents in hundredths of an inch, in millimeters.....	15
Equivalents in meters, 1 to 12 units.....	29
Relation to other length units.....	8
Cubic:	
Definition.....	4
Equivalents in cubic centimeters, 1 to 9 units.....	12
Equivalents in liters, 1 to 9 units.....	12
Number in gallon.....	12
Number in bushel.....	4
Relation to dry capacity units.....	10
Relation to liquid capacity units.....	8
Relation to other volume units.....	8
Square:	
Definition.....	12
Equivalents in square centimeters, 1 to 9 units.....	12
Relation to other area units.....	8
International Bureau of Weights and Measures.....	
Interrelation of units.....	
Introduction.....	
Kilogram:	
Definition.....	5
Equivalents in avoirdupois pounds, 1 to 9 units.....	13
Equivalents in avoirdupois pounds, 1 to 999 units.....	58
Equivalents in avoirdupois and troy pounds, short and long tons, and metric tons, 1 to 9 units.....	58
Relation to other units of mass.....	14
Kilometer:	
Cubic, definition.....	4
Definition.....	3
Equivalents in statute miles, 1 to 9 units.....	12
Equivalents in statute miles, 1 to 999 units.....	34
Square:	
Definition.....	3
Equivalents in square miles, 1 to 9 units.....	12
Law:	
Equivalent of half ounce in grams for use in post offices.....	63
Electrical units based on metric system.....	64

Page	Page
Milligram:	
Definition.....	5
Relation to other units of mass.....	10
Milliliter:	
Definition.....	5
Equivalent in cubic centimeters.....	5
Equivalents in apothecaries' drams, 1 to 9 units.....	13
Equivalents in fluid ounces, 1 to 9 units.....	13
Relation to other capacity units.....	8
Millimeter:	
Cubic, definition.....	4
Definition.....	3
Equivalents in inches, 1 to 9 units.....	12
Equivalents in inches, 1 to 99 units.....	15
Square, definition.....	4
Millimicron, definition.....	3
Minim:	
Definition.....	5
Relation to other capacity units.....	10
Nautical mile. ( <i>See</i> Mile, nautical.)	
Ounce:	
Apothecaries', definition.....	5
Avoirdupois:	
Definition.....	5
Equivalents in grams, 1 to 9 units.....	13
Relation to other units of mass.....	13
Fluid:	
Definition.....	5
Equivalents in milliliters, 1 to 9 units.....	13
Relation to other capacity units.....	13
Troy:	
Definition.....	5
Equivalents in grams, 1 to 9 units.....	13
Relation to other units of mass.....	13
Peck:	
Definition.....	5
Equivalents in liters, 1 to 9 units.....	10
Equivalents in dekaliters, 1 to 9 units.....	10
Relation to other capacity units.....	10
Volume in cubic inches.....	5
Pennyweight:	
Definition.....	5
Relation to other units of mass.....	10
Pint:	
Dry:	
Definition.....	5
Relation to other capacity units.....	10
Volume in cubic inches.....	5
Liquid:	
Definition.....	5
Equivalents in liters, 1 to 9 units.....	13
Relation to other capacity units.....	13
Volume in cubic inches.....	5
Pitches, screw thread, English and metric.....	Facing
Point, definition.....	3
Post office, equivalent of half ounce in usage.....	
Pound:	
Apothecaries':	
Definition.....	5
Relation to other units of mass.....	10
Avoirdupois:	
Definition.....	5
Equivalents in kilograms, 1 to 9 units.....	13
Equivalents in kilograms, 1 to 999 units.....	13
Equivalents in troy pounds, kilograms, short and long tons, and metric tons, 1 to 9 units.....	56
Fundamental equivalent.....	5
Relation to other units of mass.....	5
Troy:	
Definition.....	5
Equivalents in avoirdupois pounds, kilograms, short and long tons, and metric tons, 1 to 9 units.....	10
Relation to other units of mass.....	14
Quart:	
Dry:	
Definition.....	5
Equivalents in liters, 1 to 9 units.....	13
Relation to other capacity units.....	13
Volume in cubic inches.....	5
Liquid:	
Definition.....	5
Equivalents in liters, 1 to 9 units.....	13
Equivalents in liters, 1 to 999 units.....	44
Relation to other capacity units.....	8
Volume in cubic inches.....	5
Reduction factors ( <i>see also</i> separate tables).....	1
Rod:	
Definition.....	5
Equivalents in meters, 1 to 9 units.....	12
Relation to other length units.....	8
Rod, square:	
Definition.....	13
Relation to other area units.....	8
Screw threads, comparison of pitches, English and metric.....	Facing
Scruple, apothecaries':	
Definition.....	12
Relation to other units of mass.....	15
Short hundredweight. ( <i>See</i> Hundredweight, short.).....	3
Short ton. ( <i>See</i> Ton, short.).....	
Span, definition.....	5
Spelling of units.....	8
Square measure:	
Abbreviation.....	6
Units.....	3
<i>See also</i> under the name of each unit.	
Standards, metric, furnished to each State.....	63
Standards of measurement:	
Coefficient of expansion.....	6
Congress has power to fix, in Constitution.....	63
Density of, for weights.....	6
Distinction between, and units.....	5
Temperature of.....	6
Status of metric system in United States.....	63
Statute mile. ( <i>See</i> Mile, statute.).....	63
Stere, definition.....	4
Tables of equivalents:	
Method of construction.....	1
Method of use.....	1
Tapes:	
Method of support.....	6
Temperature at which standard.....	6
Tension.....	6
Ton:	
Long:	
Definition.....	5
Equivalents in troy and avoirdupois pounds, kilograms, short tons, and metric tons, 1 to 9 units.....	10
Relation to other units of mass.....	10
Short:	
Definition.....	5
Equivalents in troy and avoirdupois pounds, kilograms, long tons, and metric tons, 1 to 9 units.....	10
Relation to other units of mass.....	10
Troy units of mass ( <i>see also</i> under the name of each unit).....	5
Units:	
Abbreviations.....	6
Definitions.....	3
Spelling.....	6
Table of metric.....	1
Volume:	
Abbreviation of units.....	6
Definition of units.....	4
Fundamental units.....	4
Subsidiary units.....	4
Weights of certain coins in grams.....	63
Weights:	
Buoyancy.....	6
Density.....	6
Material.....	6
Weights and Measures, International Bureau.....	63
Yard:	
Cubic:	
Definition.....	4
Equivalents in cubic meters, 1 to 9 units.....	12
Equivalents in cubic meters, 1 to 999 units.....	40
Relation to other volume units.....	8
Definition.....	10
Equivalents in meters, 1 to 9 units.....	12
Legal equivalents.....	1
Relation to other length units.....	8
Square:	
Definition.....	3
Equivalents in square meters, 1 to 9 units.....	12
Relation to other area units.....	8



