

DEPARTMENT OF COMMERCE

CIRCULAR
OF THE
BUREAU OF STANDARDS
S. W. STRATTON, DIRECTOR

No. 47

UNITS OF WEIGHT AND MEASURE
DEFINITIONS AND TABLES OF EQUIVALENTS

[1st Edition]

Issued July 1, 1914

Superseding Bureau of Standards Miscellaneous Publication entitled,
"Tables of Equivalents of the United States Customary
and Metric Weights and Measures"



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I. INTRODUCTION

With this edition the Tables of Equivalents of United States Customary and Metric Weights and Measures, formerly published as one of the miscellaneous publications of this Bureau, becomes one of the series of Circulars of the Bureau of Standards. Several additions and changes are made in the contents.

One of these is the introduction of complete definitions of all the fundamental units and of the most common multiples and submultiples. This is followed by a section calling attention to the distinction between the *units* of weight and measure and the *standard* weights and measures. Tables are also introduced giving the interrelation of all the units of one kind—for example, of all the usual length units.

Another change that has been made has been that of recomputing all tables involving the liter to conform to the relation of 1 liter = 1.000027 cubic decimeters, a relation determined at the International Bureau of Weights and Measures since the earlier editions of these tables.¹ The United States gallon and bushel, being defined as volumes equivalent to a certain number of cubic inches, their equivalents in liters or hectoliters have heretofore been computed on the assumed relation that 1 liter was equal to 1 cubic decimeter, which, for practically all purposes, is sufficiently exact. The determination of this relation being now completed, however, it has been decided to give the relations of United States liquid and dry capacity units in terms of metric capacity units, and vice versa, in the more exact terms.

In the construction of the tables in this circular, 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

¹ *Trav. et Mém. Bur. Int. des Poids et Mesures*, 13.

in computing the multiples to the accuracy desired. For example, to convert 606 hectoliters to bushels:

- 1 hectoliter = 100 liters
- 1 liter = 1.000027 cubic decimeters
- 1 decimeter = 3.937 inches
- 1 cubic decimeter = $(3.937)^3$ inches
- 1 bushel = 2150.42 cubic inches

$$\text{Therefore } 606 \text{ hectoliters} = \frac{606 \times 100 \times 1.000027 \times (3.937)^3}{2150.42}$$

$$= 1719.718 \text{ bushels.}$$

In the actual construction of the tables, however, instead of working out such an extensive computation each time, the reduction factor, 1 hectoliter = 2.8378189 bushels, is used in place of the factor $\frac{100 \times 1.000027 \times (3.937)^3}{2150.42}$ given above.

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. For example, to obtain the equivalent of 1345 feet $11\frac{3}{8}$ inches in meters,

From the table on page 24, 134 feet = 40.84328 meters

Therefore 1340 feet = 408.4328 meters

From the same table, 5 feet = 1.52400 meters

From the table of equivalents of inches in meters, on page 25, or by using the equivalent for 1 inch in the table on page 15 and moving the decimal point one place to the right and adding the equivalent for 1 inch to the result,

$11 \text{ inches} = 0.27940 \text{ meter.}$

From the table on page 20, $\frac{3}{8}$ inch = 9.525 millimeters = 0.009525 meter.

1340 feet	= 408.4328 meters
5 feet	= 1.52400 meters
11 inches	= 0.27940 meter
$\frac{3}{8}$ inch	= 0.00952 meter

Adding, 1345 feet $11\frac{3}{8}$ inches = 410.2457 meters.

II. FUNDAMENTAL EQUIVALENTS

The fundamental unit of the metric system is the METER, the unit of length. From this the units of capacity (LITER) and of weight (GRAM) were derived. All other units are the decimal subdivisions or multiples of these. These three units are simply related, e. g., for all practical purposes 1 CUBIC DECIMETER equals

1 LITER and 1 LITER of water weighs 1 KILOGRAM. The metric tables are formed by combining the words "METER," "GRAM," and "LITER" with the six numerical prefixes, as in the following tables:

Prefxes	Meaning		Units
milli-	= <i>one-thousandth</i>	$\frac{1}{1000}$.001
centi-	= <i>one hundredth</i>	$\frac{1}{100}$.01
deci-	= <i>one-tenth</i>	$\frac{1}{10}$.1
<i>Unit</i>	= <i>one</i>		1
deka-	= <i>ten</i>	$\frac{10}{1}$	10
hecto-	= <i>one hundred</i>	$\frac{100}{1}$	100
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 legal equivalent being 1 meter = 39.37 inches (law of July 28, 1866). In 1893 the United States Office of Standard Weights and Measures was authorized to derive the yard from the meter, using for the purpose the relation legalized in 1866, 1 yard = $\frac{3600}{3937}$ meter. The customary weights are likewise referred to the kilogram (Executive order approved Apr. 5, 1893). This action fixed the values, inasmuch as the reference standards are as perfect and unalterable as it is possible for human skill to make them at this time.

All capacities are based on the equivalent 1 liter equals 1.000027 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 is approximately 20 per cent larger and the British bushel 3 per cent larger than the corresponding units used in this country.

The customary weights derived from the international kilogram are based on the value 1 avoirdupois pound = 453.5924277 grams. This value is carried out further than that given in the law, but is in accord with the latter as far as it is there given. The value of the troy pound is based upon the relation just mentioned and also the equivalent $\frac{5760}{7000}$ avoirdupois pounds equals 1 troy pound.

III. DEFINITIONS OF UNITS

1. LENGTH

Fundamental Units

A METER (m) is a unit of length equivalent to the distance between the defining lines on the international prototype meter at the International Bureau of Weights and Measures when this standard is at the temperature of melting ice (0°C).

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

Multiples and submultiples

- 1 kilometer (km) = 1000 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 = 0.1 centimeter.
- 1 micron (μ) = 0.000 001 meter = 0.001 millimeter.
- 1 millimicron ($m\mu$) = 0.000 000 001 meter = 0.001 micron.
- 1 foot (ft.) = $\frac{1}{3}$ yard = $\frac{1200}{3937}$ meter.
- 1 inch (in.) = $\frac{1}{36}$ yard = $\frac{1}{12}$ foot = $\frac{300}{3937}$ meter.
- 1 link (li.) = 0.22 yard = 7.92 inches.
- 1 rod (rd.) = $5\frac{1}{2}$ yards = $16\frac{1}{2}$ feet.
- 1 chain (ch.) = 22 yards = 100 links = 66 feet = 4 rods.
- 1 furlong (fur.) = 220 yards = 40 rods = 10 chains.
- 1 statute mile (mi.) = 1760 yards = 5280 feet = 320 rods.
- 1 hand = 4 inches.
- 1 point = $\frac{1}{72}$ inch.
- 1 mil = 0.001 inch.
- 1 fathom = 6 feet.
- 1 span = 9 inches = $\frac{1}{8}$ fathom.
- 1 cable length = 20 fathoms = 120 feet.
- 1 nautical mile
1 sea mile
1 geographical mile } United States = 6080.20 feet = 1.151 553 statute miles = 1853.249 meters.

2. AREA

Fundamental Units

A SQUARE METER (m^2) is a unit of area equivalent to the area of a square the sides of which are 1 meter.

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

Multiples and Submultiples

- 1 square kilometer (km^2) = 1 000 000 square meters.
- 1 hectare (ha), or square hectometer (hm^2) = 10 000 square meters.
- 1 are (a), or square dekameter (dkm^2) = 100 square meters.
- 1 centare (ca) = 1 square meter.
- 1 square decimeter (dm^2) = 0.01 square meter.
- 1 square centimeter (cm^2) = 0.0001 square meter.
- 1 square millimeter (mm^2) = 0.000 001 square meter = 0.01 square centimeter.
- 1 square foot (sq. ft.) = $\frac{1}{9}$ square yard.
- 1 square inch (sq. in.) = $\frac{1}{1296}$ square yard = $\frac{1}{144}$ square foot.
- 1 square link (sq. li.) = 0.0484 square yard = 62.7264 square inches.
- 1 square rod (sq. rd.) = 30.25 square yards = 272.25 square feet = 625 square links.
- 1 square chain (sq. ch.) = 484 square yards = 16 square rods = 100 000 square links.
- 1 acre (A.) = 4840 square yards = 160 square rods = 10 square chains.
- 1 square mile (sq. mi.) = 3 097 600 square yards = 640 acres.

3. VOLUME**Fundamental Units**

- A CUBIC METER (m^3) is a unit of volume equivalent to a cube the edges of which are 1 meter.
- A CUBIC YARD (cu. yd.) is a unit of volume equivalent to a cube the edges of which are 1 yard.

Multiples and Submultiples

- 1 cubic kilometer (km^3) = 1 000 000 000 cubic meters.
- 1 cubic hectometer (hm^3) = 1 000 000 cubic meters.
- 1 cubic dekameter (dkm^3) = 1000 cubic meters.
- 1 stere (s) = 1 cubic meter.
- 1 cubic decimeter (dm^3) = 0.001 cubic meter.
- 1 cubic centimeter (cm^3) = 0.000 001 cubic meter = 0.001 cubic decimeter.
- 1 cubic millimeter (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.) = $\frac{1}{46656}$ cubic yard = $\frac{1}{1728}$ cubic foot.
- 1 board foot = 144 cubic inches = $\frac{1}{12}$ cubic foot.
- 1 cord (cd.) = 128 cubic feet.

4. CAPACITY

Fundamental Units

A LITER (l) is a unit of capacity equivalent to the volume occupied by the mass of 1 kilogram of pure water at its maximum density (at a temperature of 4° 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 equivalent 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 equivalent to the volume of 2150.42 cubic inches. It is used in the measurement of dry commodities only.²

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.

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.) = $\frac{1}{32}$ gallon = $\frac{1}{4}$ liquid pint = 7.21875 cubic inches.

1 fluid ounce (fl. oz.) = $\frac{1}{128}$ gallon = $\frac{1}{16}$ liquid pint.

1 fluid dram (fl. dr.) = $\frac{1}{8}$ fluid ounce = $\frac{1}{128}$ liquid pint.

1 minim (min. or m) = $\frac{1}{60}$ fluid dram = $\frac{1}{480}$ fluid ounce.

1 firkin = 9 gallons.

1 peck (pk.) = $\frac{1}{4}$ bushel = 537.605 cubic inches.

1 dry quart (dry qt.) = $\frac{1}{2}$ bushel = $\frac{1}{8}$ peck = 67.200 625 cubic inches.

1 dry pint (dry pt.) = $\frac{1}{64}$ bushel = $\frac{1}{16}$ dry quart = 33.600 312 5 cubic inches.

1 barrel (for apples)³ = 7056 cubic inches = 105 dry quarts.

² The above bushel is the so-called stricken or struck bushel. Many dry commodities are sold by heaped bushel, which is generally specified in the State laws to be the usual stricken bushel measure "duly heaped in the form of a cone as high as the article will admit" or "heaped as high as may be without special effort or design." The heaped bushel was originally intended to be 25 per cent greater than the stricken bushel.

³ As fixed by United States statute, approved Aug. 3, 1912.

5. MASS

Fundamental Units

A KILOGRAM (kg) is a unit of mass equivalent to the mass of the international prototype kilogram at the International Bureau of Weights and Measures.

An AVOIRDUPOIS POUND (lb. av.) is a unit of mass equivalent to 0.453 592-427 7 kilogram.

A GRAM (g) is a unit of mass equivalent to one-thousandth of the mass of the international prototype kilogram at the International Bureau of Weights and Measures.

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

Multiples and Submultiples

1 metric ton (t) = 1000 kilograms.

1 hectogram (hg) = 100 grams = 0.1 kilogram.

1 dekagram (dkg) = 10 grams = 0.01 kilogram.

1 decigram (dg) = 0.1 gram.

1 centigram (cg) = 0.01 gram.

1 milligram (mg) = 0.001 gram.

1 avoirdupois ounce (oz. av.) = $\frac{1}{16}$ avoirdupois pound.

1 avoirdupois dram (dr. av.) = $\frac{1}{256}$ avoirdupois pound = $\frac{1}{16}$ avoirdupois ounce.

1 grain (gr.) = $\frac{1}{7000}$ avoirdupois pound = $\frac{10}{4375}$ avoirdupois dram = $\frac{1}{5760}$ troy pound.

1 apothecaries' pound (lb. ap.) = 1 troy pound = $\frac{5760}{7000}$ avoirdupois pound.

1 apothecaries' or troy ounce (oz. ap. or ʒ, or oz. t.) = $\frac{1}{12}$ troy pound = $\frac{480}{7000}$ avoirdupois pound = 480 grains.

1 apothecaries' dram (dr. ap. or ʒ) = $\frac{1}{96}$ apothecaries' pound = $\frac{1}{8}$ apothecaries' ounce = 60 grains.

1 pennyweight (pwt.) = $\frac{1}{20}$ troy ounce = 24 grains.

1 apothecaries' scruple (s. ap. or ℥) = $\frac{1}{3}$ apothecaries' dram = 20 grains.

1 metric carat⁴ (c) = 200 milligrams = 0.2 gram.

1 short hundredweight (sh. cwt.) = 100 avoirdupois pounds.

1 long hundredweight (l. cwt.) = 112 avoirdupois pounds.

1 short ton (sh. tn.) = 2000 avoirdupois pounds.

1 long ton (l. tn.) = 2240 avoirdupois pounds.

⁴ See Bureau of Standards Circular No. 43, 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.

IV. STANDARDS FOR MEASUREMENT

Units of measurement should be distinguished from standards for measurement, particularly in the case of length and capacity. Units of length are fixed distances, independent of any other consideration, while length standards are affected by the expansion and contraction with changes of temperature of the material of which the standard may be composed. It is therefore 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 temperature at which metric length standards are customarily made correct is 0°C , although 20°C is also used for steel tapes and some other standards intended for use at room or average outdoor temperatures.

The temperature at which standards of length of the customary system are made correct is 62°F .

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 so the capacity at any other temperature may be computed by the use of the coefficient of cubical expansion, 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. For this reason, the custom of buying and selling liquids by weight instead of by measure is recommended. It is further recommended that, when liquids are sold by volume, 68°F or 20°C be adopted as the standard temperature of the liquid.

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 is 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 at 0° C, while those of platinum are assumed to have a density of 21.5 at 0° C.

V. SPELLING AND ABBREVIATION OF UNITS

The spelling of the names of units 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 names 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 the abbreviations of the metric units, while it is used after those of the customary system.

2. The exponents, “²” and “³,” are used to signify area and volume, respectively, in the case of the metric units instead of the longer prefixes “sq.” or “cu.” In conformity with this principle the abbreviation for cubic centimeter is “cm³,” instead of “c. c.” 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,” which has a slightly larger volume. (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 the case of A. for acre, where the use of the capital letter is general.

The list of the most common units of weight and measure and their abbreviations follows:

Unit	Abbreviation	Unit	Abbreviation	Unit	Abbreviation
acre	A.	dram, avoirdupois	dr. av.	ounce, avoirdupois	oz. av.
are	a	dram, fluid	fl. dr.	ounce, fluid	fl. oz.
avoirdupois	av.	fathom	fath.	ounce, troy	oz. t.
barrel	bbl.	foot	ft.	peck	pk.
board foot	bd. ft.	firkin	fir.	pennyweight	dwt.
bushel	bu.	furlong	fur.	pint	pt.
carat, metric	c	gallon	gal.	pound	lb.
centare	ca	grain	gr.	pound, apothecaries	lb. ap.
centigram	cg	gram	g	pound, avoirdupois	lb. av.
centiliter	cl	hectare	ha	pound, troy	lb. t.
centimeter	cm	hectogram	hg	quart	qt.
chain	ch.	hectoliter	hl	rod	rd.
cubic centimeter	cm ³	hectometer	hm	scruple, apothecaries	ap. s. or ʒ
cubic decimeter	dm ³	hogshead	hhd.	square centimeter	cm ²
cubic dekameter	dkm ³	hundredweight	cwt.	square chain	sq. ch.
cubic foot	cu. ft.	inch	in.	square decimeter	dm ²
cubic hectometer	hm ³	kilogram	kg	square dekameter	dkm ²
cubic inch	cu. in.	kiloliter	kl	square foot	sq. ft.
cubic kilometer	km ³	kilometer	km	square hectometer	hm ²
cubic meter	m ³	link	li.	square inch	sq. in.
cubic mile	cu. mi.	liquid	liq.	square kilometer	km ²
cubic millimeter	mm ³	liter	l	square meter	m ²
cubic yard	cu. yd.	meter	m	square mile	sq. mi.
decigram	dg	metric ton	t	square millimeter	mm ²
deciliter	dl	micron	μ	square rod	sq. rd.
decimeter	dm	mile	mi.	square yard	sq. yd.
decistere	ds	milligram	mg	stere	s
dekagram	dkg	milliliter	ml	ton	tn.
dekaliter	dkl	millimeter	mm	ton, metric	t.
dekaneter	dkm	millimicron	mm	troy	
dekastere	dks	minim	min. or ♏	yard	yd.
dram	dr.	ounce	oz.		
dram, apothecaries	dr. ap. or ʒ	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	0.007 716 05	0.000 025 507 6
1 square link	=	62.7264	1	0.4356	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	0.000 520 833	0.000 130 208
1 fluid dram	=	60	1	0.031 25	0.007 812 5
1 fluid ounce	=	480	8	0.25	0.0625
1 gill	=	1920	32	1	0.25
1 liquid pint	=	7680	128	16	1
1 liquid quart	=	15 360	256	32	2
1 gallon	=	61 440	1024	128	8
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
0.01	0.000 125	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	0.000 568 181	91.440 18	0.914 401 8	=1 yard
0.25	0.003 125	502.9210	5.029 210	=1 rod
1	0.0125	2011.684	20.116 84	=1 chain
80	1	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	0.000 000 000 249 1	6.451 626	0.000 645 162 6	0.000 000 064 516	=1 square inch
0.000 01	0.000 000 015 625	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
0.006 25	0.000 009 765 625	252 929.5	25.292 95	0.002 529 295	=1 square rod
0.1	0.000 156 25	4 046 873	404.6873	0.040 468 7	=1 square chain
1	0.001 562 5	4 046 872 6	4046.873	0.404 687	=1 acre
640	1	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	0.0001	0.000 000 01	=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
1	0.001	0.000 001	=1 cubic centimeter
1 000	1	0.001	=1 cubic decimeter
1 000 000	1000	1	=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
0.003 906 25	0.000 976 562	3.696 61	0.003 696 61	0.225 586	=1 fluid dram
0.031 25	0.007 812 5	29.5729	0.029 572 9	1.804 69	=1 fluid ounce
0.125	0.031 25	118.292	0.118 292	7.218 75	=1 gill
0.5	0.125	473.167	0.473 167	28.875	=1 liquid pint
1	0.25	946.333	0.946 333	57.75	=1 liquid quart
4	1	3785.332	3.785 332	231	=1 gallon
0.001 056 71	0.000 264 178	1	0.001	0.061 025 0	=1 milliliter
1.056 71	0.264 178	1000	1	61.0250	=1 liter
0.017 316 0	0.004 329 00	16.3867	0.016 386 7	1	=1 cubic inch

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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 avoir. 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 avoir. 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 avoir. 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

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
0.05	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	0.003 906 25	1771.8454	1.771 845 4	0.001 771 845	=1 avoir. dram
0.125	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	0.0625	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
12	1	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	1	453 592.4277	453.592 4277	0.453 592 427 7	=1 avoir. pound
0.000 032 150 74	0.000 002 679 23	0.000 002 204 62	1	0.001	0.000 001	=1 milligram
0.032 150 74	0.002 679 23	0.002 204 62	1000	1	0.001	=1 gram
32.150 742	2.679 228 5	2.204 622 341	1 000 000	1000	1	=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	0.453 592 427 7	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	1	0.001	=1 kilogram
0.984 206 40	1000	1	=1 metric ton

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

1. LENGTH

Inches (in.)	Millimeters (mm)	Feet (ft.)	Meters (m)	Yards (yd.)	Meters (m)	Rods (rd.)	Meters (m)	U.S. miles (mi.)	Kilometers (km)
0.039 37=1			1=0.304 801		1=0.914 402	0.198 838=1		0.621 370=1	
0.078 74=2			2=0.609 601		2=1.828 804	0.397 677=2		1.242 740=2	
0.118 11=3			3=0.914 402		3=2.743 205	0.596 515=3		1.864 110=3	
0.157 48=4			4=1.219 202		4=3.657 607	0.795 354=4		2.485 480=4	
0.196 85=5			5=1.524 003		5=4.572 009	0.994 192=5		3.106 850=5	
0.236 22=6			6=1.828 804		6=5.485 411	1.193 030=6		3.728 220=6	
0.275 59=7			7=2.133 604		7=6.400 813	1.391 869=7		4.349 590=7	
0.314 96=8			8=2.438 405		8=7.315 215	1.590 707=8		4.970 960=8	
0.354 33=9			9=2.743 205		9=8.229 616	1.789 545=9		5.592 330=9	
1= 25.4001		3.280 83=1		1.093 611=1		1= 5.029 21		1= 1.609 347	
2= 50.8001		6.561 67=2		2.187 222=2		2=10.058 42		2= 3.218 694	
3= 76.2002		9.842 50=3		3.280 833=3		3=15.087 63		3= 4.828 042	
4=101.6002		13.123 33=4		4.374 444=4		4=20.116 84		4= 6.437 389	
5=127.0003		16.404 17=5		5.468 056=5		5=25.146 05		5= 8.046 736	
6=152.4003		19.685 00=6		6.561 667=6		6=30.175 26		6= 9.656 083	
7=177.8004		22.965 83=7		7.655 278=7		7=35.204 47		7=11.265 431	
8=203.2004		26.246 67=8		8.748 889=8		8=40.233 68		8=12.874 778	
9=228.6005		29.527 50=9		9.842 500=9		9=45.262 89		9=14.484 125	

2. AREA

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

3. VOLUME

Cubic inches (cu. in.)	Cubic centimeters (cm ³)	Cubic feet (cu. ft.)	Cubic meters (m ³)	Cubic yards (cu. yd.)	Cubic meters (m ³)	Cubic inches (cu. in.)	Liters (l)	Cubic feet (cu. ft.)	Liters (l)
0.061 02=1			1=0.028 317		1=0.7646		1=0.016 386 7		1= 28.316
0.122 05=2			2=0.056 634		2=1.5291		2=0.032 773 4		2= 56.633
0.183 07=3			3=0.084 951		3=2.2937		3=0.049 160 2		3= 84.949
0.244 09=4			4=0.113 268		4=3.0582		4=0.065 546 9		4=113.265
0.305 12=5			5=0.141 585		5=3.8228		5=0.081 933 6		5=141.581
0.366 14=6			6=0.169 902		6=4.5874		6=0.098 320 3		6=169.898
0.427 16=7			7=0.198 219		7=5.3519		7=0.114 707 0		7=198.214
0.488 19=8			8=0.226 536		8=6.1165		8=0.131 093 8		8=226.530
0.549 21=9			9=0.254 853		9=6.8810		9=0.147 480 5		9=254.846
1= 16.3872		35.314=1		1.3079=1		61.025=1		0.035 315=1	
2= 32.7743		70.629=2		2.6159=2		122.050=2		0.070 631=2	
3= 49.1615		105.943=3		3.9238=3		183.075=3		0.105 946=3	
4= 65.5486		141.258=4		5.2318=4		244.100=4		0.141 262=4	
5= 81.9358		176.572=5		6.5397=5		305.125=5		0.176 577=5	
6= 98.3230		211.887=6		7.8477=6		366.150=6		0.211 892=6	
7=114.7101		247.201=7		9.1556=7		427.175=7		0.247 208=7	
8=131.0973		282.516=8		10.4635=8		488.200=8		0.282 523=8	
9=147.4845		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 (l)	U. S. liquid quarts (qt.)	Liters (l)	U. S. gallons (gal.)	Liters (l)
0.270 52=1		0.033 815=1		1=0.473 17		1=0.946 33		0.264 18=1	
0.541 04=2		0.067 629=2		2=0.946 33		2=1.892 67		0.528 36=2	
0.811 55=3		0.101 444=3		3=1.419 50		3=2.839 00		0.792 53=3	
1.082 07=4		0.135 259=4		4=1.892 67		4=3.785 33		1.056 71=4	
1.352 59=5		0.169 074=5		5=2.365 83		5=4.731 67		1.320 89=5	
1.623 11=6		0.202 888=6		6=2.839 00		6=5.678 00		1.585 07=6	
1.893 63=7		0.236 703=7		7=3.312 17		7=6.624 33		1.849 24=7	
2.164 14=8		0.270 518=8		8=3.785 33		8=7.570 66		2.113 42=8	
2.434 66=9		0.304 333=9		9=4.258 50		9=8.517 00		2.377 60=9	
1= 3.6966		1= 29.573		2. 1134=1		1. 056 71=1		1= 3.785 33	
2= 7.3932		2= 59.146		4. 2268=2		2. 113 42=2		2= 7.570 66	
3=11.0898		3= 88.719		6. 3403=3		3. 170 13=3		3=11.356 00	
4=14.7865		4=118.292		8. 4537=4		4. 226 84=4		4=15.141 33	
5=18.4831		5=147.865		10. 5671=5		5. 283 55=5		5=18.926 66	
6=22.1797		6=177.437		12. 6805=6		6. 340 26=6		6=22.711 99	
7=25.8763		7=207.010		14. 7939=7		7. 396 97=7		7=26.497 33	
8=29.5729		8=236.583		16. 9074=8		8. 453 68=8		8=30.282 66	
9=33.2695		9=266.156		19. 0208=9		9. 510 39=9		9=34.067 99	

5. CAPACITY—DRY MEASURE

U. S. dry quarts (qt.)	Liters (l)	U. S. pecks (pk.)	Liters (l)	U. S. pecks (pk.)	Dekaliters (dkl)	U. S. bushels (bu.)	Hecto- liters (hl)	U. S. bushels per acre	Hecto- liters per hectare
0.9081=1		0.113 51=1		1=0.8810		1=0.352 38		1=0.8708	
1.8162=2		0.227 03=2		2=1.7619		2=0.704 77		2=1.7415	
2.7243=3		0.340 54=3		3=2.6429		3=1.057 15		3=2.6123	
3.6324=4		0.454 05=4		4=3.5238		4=1.409 53		4=3.4830	
4.5405=5		0.567 56=5		5=4.4048		5=1.761 92		5=4.3538	
5.4486=6		0.681 08=6		6=5.2857		6=2.114 30		6=5.2245	
6.3567=7		0.794 59=7		7=6.1667		7=2.466 68		7=6.0953	
7.2648=8		0.908 10=8		8=7.0477		8=2.819 07		8=6.9660	
8.1729=9		1.021 61=9		9=7.9286		9=3.171 45		9=7.8368	
1=1.1012		1= 8.810		1.1351=1		2. 8378=1		1. 1484=1	
2=2.2024		2=17.619		2. 2703=2		5. 6756=2		2. 2969=2	
3=3.3036		3=26.429		3. 4054=3		8. 5135=3		3. 4453=3	
4=4.4048		4=35.238		4. 5405=4		11. 3513=4		4. 5937=4	
5=5.5060		5=44.048		5. 6756=5		14. 1891=5		5. 7421=5	
6=6.6072		6=52.857		6. 8108=6		17. 0269=6		6. 8906=6	
7=7.7084		7=61.667		7. 9459=7		19. 8647=7		8. 0390=7	
8=8.8096		8=70.477		8. 0810=8		22. 7026=8		9. 1874=8	
9=9.9108		9=79.286		10. 2161=9		25. 5404=9		10. 3359=9	

6. MASS

Grains	Grams (gr.)	Apothe- caries' drams (3 or dr. ap.)	Grams (g)	Troy ounces (oz. t.)	Grams (g)	Avoirdupois ounces (oz. av.)	Grams (g)	Avoirdupois pounds (lb. av.)	Kilo- grams (kg)
1=0.064 799		0.257 21=1		0.032 151=1		0.035 274=1		1=0.453 59	
2=0.129 598		0.514 41=2		0.064 301=2		0.070 548=2		2=0.907 18	
3=0.194 397		0.771 62=3		0.096 452=3		0.105 822=3		3=1.360 78	
4=0.259 196		1.028 82=4		0.128 603=4		0.141 096=4		4=1.814 37	
5=0.323 995		1.286 03=5		0.160 754=5		0.176 370=5		5=2.267 96	
6=0.388 794		1.543 24=6		0.192 904=6		0.211 644=6		6=2.721 55	
7=0.453 592		1.800 44=7		0.225 055=7		0.246 918=7		7=3.175 15	
8=0.518 391		2.057 65=8		0.257 206=8		0.282 192=8		8=3.628 74	
9=0.583 190		2.314 85=9		0.289 357=9		0.317 466=9		9=4.082 33	
15.4324=1		1= 3.8879		1= 31.103		1= 28.350		2.204 62=1	
30.8647=2		2= 7.7759		2= 62.207		2= 66.699		4.409 24=2	
46.2971=3		3=11.6638		3= 93.310		3= 85.049		6.613 87=3	
61.7294=4		4=15.5517		4=124.414		4=113.398		8.818 49=4	
77.1618=5		5=19.4397		5=155.517		5=141.748		11.023 11=5	
92.5941=6		6=23.3276		6=186.621		6=170.097		13.227 73=6	
108.0265=7		7=27.2155		7=217.724		7=198.447		15.432 36=7	
123.4589=8		8=31.1035		8=248.828		8=226.796		17.636 98=8	
138.8912=9		9=34.9914		9=279.931		9=255.146		19.841 60=9	

VIII. SPECIAL TABLES**1. 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							17	= 13.494	.53125
						3	= 1.191	.046875							34	= 13.891	.546875
						4	= 1.588	.0625							35	= 14.288	.5625
						5	= 1.984	.078125							36	= 14.684	.58125
						6	= 2.381	.09375							37	= 15.081	.59375
						7	= 2.778	.109375							38	= 15.478	.609375
						8	= 3.175	.1250							39	= 15.875	.625
						9	= 3.572	.140625							40	= 16.272	.640625
						10	= 3.969	.15625							41	= 16.669	.65625
						11	= 4.366	.171875							42	= 17.066	.671875
						12	= 4.763	.1875							43	= 17.463	.6875
						13	= 5.159	.203125							44	= 17.859	.703125
						14	= 5.556	.21875							45	= 18.255	.71875
						15	= 5.953	.234375							46	= 18.653	.734375
						16	= 6.350	.2500							47	= 19.050	.75
						17	= 6.747	.265625							48	= 19.447	.765625
						18	= 7.144	.28125							49	= 19.844	.78125
						19	= 7.541	.296875							50	= 20.241	.796875
						20	= 7.938	.3125							51	= 20.638	.8125
						21	= 8.334	.328125							52	= 21.034	.828125
						22	= 8.731	.34375							53	= 21.431	.84375
						23	= 9.128	.359375							54	= 21.828	.859375
						24	= 9.525	.3750							55	= 22.225	.875
						25	= 9.922	.390625							56	= 22.622	.890625
						26	= 10.319	.40625							57	= 23.019	.90625
						27	= 10.716	.421875							58	= 23.416	.921875
						28	= 11.113	.4375							59	= 23.813	.9375
						29	= 11.509	.453125							60	= 24.209	.953125
						30	= 11.906	.46875							61	= 24.606	.96875
						31	= 12.303	.484375							62	= 25.003	.984375
1	2	4	8	16	32	= 12.700	.5		1	2	4	8	16	32	64	= 25.400	1.000

2. 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	5.030	5.334	5.588	5.842	6.096	6.350	6.604	6.858	7.112	7.365
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	17.525
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

3. 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	.78740	.82677	.86614	.90551	.94488	.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	2.20472	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

4. 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
13.937 50	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 87	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	5.030 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
13.937.50	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

Circular of the Bureau of Standards

5. COMPARISON OF PRICES

French and German prices for metric units, British prices for imperial units, and United States prices for United States standard weights and measures

[Based upon the circular of the Secretary of the Treasury dated July 1, 1914, fixing the legal equivalent of the (German) mark at 23.8 cents, of the (French) franc at 19.3 cents, and the British pound sterling at \$4.8665.]

Francs per kilogram	Dollars per avoirdupois pound	Francs per meter	Dollars per yard	Francs per liter	Dollars per U. S. liquid gallon	Francs per hectoliter	Dollars per bushel	Shillings per British imperial gallon	Dollars per U. S. liquid gallon
1=.088		1=0.176		1=0.731		1=0.068		1=0.203	
2=.175		2=.353		2=1.461		2=.136		2=.405	
3=.263		3=.529		3=2.192		3=.204		3=.608	
4=.350		4=.706		4=2.922		4=.272		4=.810	
5=.438		5=.882		5=3.653		5=.340		5=1.013	
6=.525		6=1.059		6=4.383		6=.408		6=1.216	
7=.613		7=1.235		7=5.114		7=.476		7=1.418	
8=.700		8=1.412		8=5.845		8=.544		8=1.621	
9=.788		9=1.588		9=6.575		9=.612		9=1.824	
11.423=1		5.666=1		1.369=1		14.704=1		4.936=1	
22.846=2		11.333=2		2.738=2		29.407=2		9.871=2	
34.269=3		16.999=3		4.106=3		44.111=3		14.807=3	
45.692=4		22.666=4		5.475=4		58.815=4		19.742=4	
57.115=5		28.332=5		6.844=5		73.519=5		24.678=5	
68.537=6		33.998=6		8.213=6		88.222=6		29.613=6	
79.960=7		39.665=7		9.582=7		102.926=7		34.549=7	
91.383=8		45.331=8		10.950=8		117.630=8		39.484=8	
102.806=9		50.997=9		12.319=9		132.334=9		44.420=9	
Marks per kilogram	Dollars per avoirdupois pound	Marks per meter	Dollars per yard	Marks per liter	Dollars per U. S. liquid gallon	Marks per hectoliter	Dollars per bushel	Shillings per British bushel	Dollars per U. S. bushel
1=0.108		1=0.218		1=0.901		1=0.084		1=0.236	
2=.216		2=.435		2=1.802		2=.168		2=.472	
3=.324		3=.653		3=2.703		3=.252		3=.707	
4=.432		4=.871		4=3.604		4=.335		4=.943	
5=.540		5=1.088		5=4.505		5=.419		5=1.179	
6=.648		6=1.306		6=5.405		6=.503		6=1.415	
7=.756		7=1.523		7=6.306		7=.587		7=1.650	
8=.864		8=1.741		8=7.207		8=.671		8=1.886	
9=.972		9=1.959		9=8.108		9=.755		9=2.122	
9.263=1		4.595=1		1.110=1		11.924=1		4.241=1	
18.526=2		9.190=2		2.220=2		23.847=2		8.483=2	
27.789=3		13.785=3		3.330=3		35.771=3		12.724=3	
37.052=4		18.380=4		4.440=4		47.694=4		16.966=4	
46.316=5		22.975=5		5.550=5		59.618=5		21.207=5	
55.579=6		27.570=6		6.660=6		71.542=6		25.449=6	
64.842=7		32.165=7		7.770=7		83.465=7		29.690=7	
74.105=8		36.760=8		8.880=8		95.389=8		33.932=8	
83.368=9		41.355=9		9.990=9		107.312=9		38.173=9	

IX. TABLES OF EQUIVALENTS FROM 1 TO 999 UNITS

Circular of the Bureau of Standards

LENGTH—FEET TO METERS

[Reduction factor: 1 foot = 0.304800606 meter]

Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
0	0	100	30.48006	200	60.96012	300	91.44018	400	121.92024	500	152.40030	600	182.88037	700	213.36043
1	0.30480	1	30.78486	2	61.26692	1	91.74498	1	122.22504	1	152.70511	1	183.16517	1	213.66243
2	0.60960	2	31.08966	3	61.56973	2	92.04978	3	92.33446	2	122.22885	3	153.00991	2	183.49897
3	0.91440	3	31.39446	4	61.87452	3	92.33446	3	122.33635	3	153.31471	3	183.70427	3	213.97003
4	1.21920	4	32.00406	5	62.18412	4	92.65939	4	123.13945	5	153.61951	4	184.09557	4	214.27483
5	1.52400	5	32.30866	6	62.48112	5	92.96149	5	123.44426	5	153.92431	5	184.48443	5	214.54589
6	1.82880	6	32.61367	7	63.09373	6	93.26899	6	123.74905	6	154.22911	6	184.70917	6	215.03697
7	2.13360	7	32.91847	8	63.41236	7	93.57379	7	124.05385	8	154.53391	7	185.13977	7	215.49403
8	2.43840	8	33.22327	9	63.70333	9	94.18339	9	124.36345	9	155.14351	8	185.31877	8	215.75985
9	2.74321	9	33.53807	10	64.09813	10	94.48819	10	124.66825	10	155.44831	10	185.92837	10	216.40843
10	3.04801	10	33.83287	11	64.1293	11	94.79239	11	125.27305	11	155.75311	11	186.23317	11	216.71323
11	3.35281	11	34.13767	12	64.61773	12	95.09779	12	125.57785	12	156.05791	12	186.53279	12	217.01803
12	3.65761	12	34.42427	13	64.92253	13	95.40259	13	125.88265	13	156.36271	13	186.84277	13	217.32283
13	3.96241	13	34.71427	14	65.70739	14	95.70339	14	126.18745	14	156.66751	14	187.14757	14	217.62624
14	4.26721	14	35.00207	15	65.53213	15	96.01219	15	126.49225	15	156.97231	15	187.45237	15	217.93244
15	4.57201	15	35.33693	16	65.83693	16	96.31693	16	126.79705	16	157.27711	16	188.75713	16	218.23724
16	4.87681	16	35.66167	17	66.14173	17	96.62179	17	127.10185	17	157.58192	17	189.06198	17	218.54204
17	5.18161	17	35.96647	18	66.44563	18	96.92659	18	127.40665	18	157.88672	18	189.36678	18	218.84684
18	5.48641	18	36.27127	19	66.75133	19	97.1271146	19	127.71146	19	158.16718	19	191.15164	19	219.63170
19	5.79211	19	36.57607	20	67.05613	20	97.58620	20	128.01626	20	158.49632	20	188.97638	20	219.34664
20	6.09601	20	36.88087	21	67.36093	21	97.84100	21	128.32106	21	158.80112	21	189.28118	21	219.76124
21	6.40081	21	37.16567	22	67.66574	22	98.14580	22	128.52386	22	159.10592	22	189.55938	22	220.06604
22	6.70561	22	37.49047	23	67.97054	23	98.45080	23	128.30606	23	159.41072	23	189.80925	23	220.37084
23	7.01041	23	37.79528	24	68.27334	24	98.75540	24	128.53446	24	159.71552	24	190.19558	24	220.67564
24	7.31521	24	38.0008	25	68.58014	25	99.06020	25	129.04266	25	160.02032	25	190.50038	25	220.98044
25	7.62002	25	38.40488	26	68.83894	26	99.36500	26	129.34506	26	160.32512	26	190.80538	26	221.28524
26	7.92882	26	38.70968	27	69.18974	27	99.68980	27	129.62992	27	160.62992	27	191.10993	27	221.57630
27	8.23662	27	39.01448	28	69.49454	28	99.97460	28	130.45466	28	160.93472	28	191.41478	28	222.15017
28	8.53422	28	39.31928	29	70.27940	29	100.27940	29	130.75946	29	161.23952	29	191.71958	29	222.37490
29	8.83222	29	39.59334	30	70.59934	30	100.59934	30	130.99334	30	161.50112	30	192.19964	30	222.67971
30	9.14482	30	39.62408	31	70.10414	31	100.84220	31	131.06425	31	161.54432	31	192.04338	31	222.90445
31	9.44832	31	39.92888	32	70.40894	32	100.89090	32	131.36936	32	161.84912	32	192.38915	32	223.16041
32	9.75362	32	40.23368	33	70.71374	33	101.19380	33	131.67386	33	162.15392	33	192.63399	33	223.11045
33	10.05842	33	40.53848	34	71.01854	34	101.41300	34	131.97866	34	162.45872	34	192.98879	34	223.41385
34	10.36222	34	40.83430	35	71.32334	35	101.80340	35	132.28346	35	162.76353	35	193.32836	35	223.73837
35	10.66802	35	41.14808	36	71.62814	36	102.10820	36	132.58827	36	163.06833	36	193.58839	36	224.08915
36	10.97802	36	41.45288	37	71.93594	37	102.41300	37	132.89307	37	163.36833	37	193.89307	37	224.33385
37	11.27762	37	41.75768	38	72.23794	38	102.71781	38	133.19787	38	163.67793	38	194.15799	38	224.63835
38	11.58222	38	42.06288	39	72.54255	39	103.02621	39	133.50267	39	163.98273	39	194.46279	39	224.94291
39	11.88722	39	42.36728	40	72.84738	40	103.32741	40	133.80747	40	164.28753	40	194.76759	40	225.24765
40	12.19202	40	42.67209	41	73.15215	41	103.63221	41	134.11227	41	164.59233	41	195.02339	41	225.55235
41	12.49682	41	42.97689	42	73.45695	42	103.93701	42	134.41707	42	164.89713	42	195.37119	42	226.33731
42	12.80163	42	43.28169	43	73.76175	43	104.21811	43	134.72187	43	165.20193	43	196.21217	43	226.64211
43	13.10643	43	43.58649	44	74.0655	44	104.54616	44	135.02667	44	165.50673	44	196.46491	44	226.94691
44	13.41123	44	43.89129	45	74.37135	45	104.85141	45	135.33147	45	165.81153	45	196.72059	45	227.35178
45	13.71603	45	44.19609	46	74.67615	46	105.15621	46	135.63267	46	166.11633	46	197.07645	46	227.55552
46	14.02683	46	44.50089	47	74.98095	47	105.46101	47	135.94107	47	166.42113	47	197.38125	47	227.86163
47	14.32565	47	44.80569	48	75.28575	48	105.75851	48	136.24587	48	166.72593	48	197.19059	48	228.16612
48	14.63503	48	45.11095	49	75.59059	49	106.10731	49	136.55606	49	167.03073	49	197.51080	49	228.46168
49	14.93523	49	45.41529	50	75.89535	50	106.37341	50	136.85547	50	167.30757	50	197.81560	50	228.75757

Units of Weight and Measure—Definitions and Tables of Equivalents

25

15.24003	150	45.72009	106.68021	450	137.16027	550	167.64034	650	198.12040	750	228.60046	850	259.00052	950	289.50058
1 15.5483	1	46.03489	106.98095	1	137.46507	1	167.94514	1	198.45250	1	228.60526	1	259.36532	1	289.86538
2 15.3963	2	46.32969	107.38975	2	137.28951	2	168.24994	2	198.73000	2	228.21006	2	259.60012	2	290.17018
3 16.15443	3	46.63449	107.71155	3	137.39462	3	168.55474	3	199.03480	3	229.51486	3	259.94942	3	290.44748
4 16.49329	4	46.93854	107.89452	4	138.07462	4	168.85954	4	199.33960	4	229.81966	4	259.77975	4	290.77975
5 16.76403	5	47.24409	108.20422	5	138.68425	5	169.16334	5	199.64440	5	230.12446	5	260.60452	5	291.08458
6 17.06883	6	47.54890	108.52896	6	138.50902	6	169.46914	6	199.94920	6	230.12226	6	260.90032	6	291.36938
7 17.37677	7	47.85370	108.83372	7	139.29388	7	169.77394	7	200.25400	7	230.73406	7	261.24112	7	291.69418
8 17.56844	8	48.18850	109.18862	8	139.59868	8	170.08784	8	200.55830	8	231.03886	8	261.51892	8	291.90898
9 17.96324	9	48.46330	109.49436	9	139.90348	9	170.38534	9	200.86360	9	231.43466	9	261.83372	9	291.30378
60 18.28804	160	48.76810	260	170.24816	360	180.20282	460	190.16840	560	201.68834	630	201.64846	760	202.60046	
1 18.59284	1	49.07290	270	170.55296	1	140.51302	1	170.99314	1	201.47320	1	231.95326	1	292.91339	
2 18.89764	2	49.38770	279	170.85776	2	140.81788	2	171.29711	2	202.77800	2	232.52813	2	293.21819	
3 19.20244	3	49.68250	300	180.16268	3	141.12268	3	171.60274	3	202.08280	3	233.02929	3	293.52299	
4 19.50724	4	49.98730	304	180.46736	4	141.42748	4	171.90754	4	202.38760	4	233.34773	4	293.82779	
5 19.81204	5	50.29210	305	180.77216	5	141.73228	5	172.21234	5	202.69241	5	233.65253	5	294.12359	
6 20.11684	6	50.59639	306	181.07696	6	142.03708	6	172.51715	6	202.99721	6	233.97333	6	294.43739	
7 20.42164	7	50.90170	307	181.38176	7	142.34188	7	172.82195	7	203.20213	7	234.74219	7	295.22213	
8 20.72644	8	51.20650	308	181.68656	8	142.66662	8	173.12675	8	203.60681	8	234.08687	8	295.04699	
9 21.03124	9	51.51130	309	181.99136	9	142.47142	9	173.43155	9	203.91161	9	234.39167	9	295.35179	
70 21.33604	170	51.81610	370	182.29616	470	143.26629	570	173.73363	670	204.21641	770	231.69647	870	265.16753	
1 21.61084	1	51.81610	371	182.60097	1	113.08103	1	143.56109	1	204.04115	1	235.01027	1	295.96139	
2 21.91564	2	52.42570	372	182.90577	2	113.35553	2	143.86589	2	204.34959	2	235.36067	2	295.76613	
3 22.20544	3	52.73051	373	183.21057	3	113.69063	3	144.16075	3	204.65075	3	235.61087	3	295.57099	
4 22.55525	4	53.03551	374	183.51537	4	113.99543	4	144.47549	4	205.45555	4	235.91567	4	296.87579	
5 22.86005	5	53.34011	375	183.82017	5	114.30203	5	144.78029	5	205.76635	5	236.22047	5	297.18059	
6 23.16485	6	53.64491	376	184.12097	6	114.60503	6	145.09589	6	206.05211	6	236.52527	6	297.48539	
7 23.46965	7	53.94971	377	184.42977	7	114.90933	7	145.38939	7	206.35021	7	236.83007	7	297.79050	
8 23.77445	8	54.25451	378	184.71545	8	115.21463	8	145.69469	8	176.17475	8	237.13847	8	298.05050	
9 24.07925	9	54.55931	379	185.03537	9	115.51943	9	145.99449	9	176.47955	9	206.95961	9	237.43967	
80 24.38405	180	54.86411	380	185.34417	480	146.30429	580	176.78435	680	207.26441	780	237.44448	880	268.22454	
1 24.68885	1	55.16891	1	85.64897	1	116.12903	1	146.60909	1	177.08915	1	238.04928	1	299.00940	
2 24.90365	2	55.47371	2	85.95377	2	116.43383	2	146.91389	2	177.39535	2	207.87402	2	268.83414	
3 25.20845	3	55.77851	3	86.25557	3	116.73863	3	147.21869	3	177.69876	3	208.17882	3	269.15894	
4 26.03255	4	56.08331	4	86.56337	4	117.04343	4	147.52350	4	178.00536	4	208.48362	4	269.44374	
5 26.20085	5	56.38811	5	86.86317	5	117.38230	5	147.82830	5	178.30836	5	208.78842	5	269.74854	
6 26.21225	6	56.69291	6	87.17297	6	117.63304	6	148.13310	6	178.61316	6	209.03322	6	270.03334	
7 26.51765	7	56.99771	7	87.47777	7	117.9784	7	148.43797	7	179.91796	7	209.38820	7	270.38814	
8 26.82245	8	57.30251	8	87.78258	8	118.22624	8	149.74270	8	179.22276	8	209.70282	8	270.62294	
9 27.12725	9	57.60732	9	88.08738	9	118.55744	9	150.04750	9	179.52756	9	210.00762	9	270.97774	
90 27.43205	190	57.91212	290	88.39218	490	149.35230	590	179.83236	690	240.79248	790	271.2254	990	301.75260	
1 27.73686	1	58.21692	1	88.69698	1	119.17704	1	149.65710	1	180.13716	1	210.61717	1	302.05740	
2 28.01666	2	58.52152	2	89.00178	2	119.48184	2	149.96190	2	180.44166	2	241.40208	2	302.36220	
3 28.34646	3	58.82652	3	89.30658	3	119.76644	3	150.26670	3	180.74676	3	211.53162	3	302.66701	
4 28.65126	4	59.13132	4	89.61138	4	120.09144	4	150.57150	4	181.05156	4	242.01168	4	302.97181	
5 28.95086	5	59.43612	5	89.91618	5	120.39624	5	150.87530	5	181.35636	5	242.36442	5	302.76655	
6 29.20808	6	59.74092	6	90.20938	6	120.70104	6	151.18110	6	181.66116	6	242.61129	6	303.10135	
7 29.55566	7	60.04572	7	121.00584	7	151.48590	7	151.79076	7	181.96596	7	242.92609	7	303.88621	
8 29.87016	8	60.35052	8	90.83058	8	121.31064	8	151.79076	8	182.27076	8	243.20389	8	273.71095	
9 30.17526	9	60.65532	9	91.13338	9	121.61544	9	152.09550	9	182.57557	9	243.53369	9	274.01575	

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

4 inches = 0.10160 meter
 5 inches = .12700 meter
 6 inches = .15240 meter

7 inches = 0.17780 meter
 8 inches = .20220 meter
 9 inches = .22860 meter

10 inches = 0.25400 meter
 11 inches = .27940 meter
 12 inches = .30480 meter

Circular of the Bureau of Standards

LENGTH—METERS TO FEET

[Reduction factor: 1 meter = 3.280833333 feet]

Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
0	328.08333	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	331.36417	1	659.44750	2	990.81167	3	1,318.89500	4	1,643.69750	5	1,971.06167	6	2,293.86417	7	2,627.94750
2	656.16667	2	662.72833	3	984.50000	4	1,318.89500	5	1,646.77833	6	1,972.03450	7	2,303.14500	8	2,631.22833
3	982.50000	3	1,317.92583	4	1,641.00917	5	1,984.09250	6	2,292.13225	7	2,634.50917	8	2,932.59250	9	3,295.31167
4	1,313.23333	5	1,641.20667	6	1,984.27333	7	2,292.354667	8	2,635.54000	9	2,981.62333	10	2,637.79067	11	2,962.59250
5	164.4017	5	344.48750	6	672.57083	7	1,000.65417	8	1,328.73750	9	1,656.82083	10	1,984.90417	11	2,641.07000
6	19.68500	6	347.76833	7	673.85167	8	1,000.65417	9	1,332.10167	10	1,660.18333	11	1,984.90417	12	2,641.15417
7	26.24667	7	351.04917	8	679.13250	9	1,007.21583	10	1,335.29175	11	1,663.38250	12	1,984.85000	13	2,642.43500
8	26.95833	8	354.33000	9	682.41333	10	1,010.49667	11	1,338.58000	12	1,666.66333	13	1,981.59167	14	2,647.62350
9	29.52750	9	357.61083	10	685.69417	11	1,013.77500	12	1,341.89833	13	1,669.94417	14	1,982.02750	15	2,650.91333
10	328.08333	110	660.89167	210	988.97500	310	1,017.05833	410	1,345.14167	510	1,673.22500	610	2,001.30833	710	2,329.39167
11	36.08917	1	664.17250	2	992.25583	3	1,020.33917	4	1,348.42250	5	1,676.50583	6	2,001.58197	7	2,332.67250
12	39.70000	2	367.45333	3	695.53667	4	1,032.70333	5	1,351.70333	6	2,007.87000	7	2,335.93333	8	2,660.75583
13	42.65083	3	370.73417	4	698.81750	5	1,026.90083	6	1,354.98417	7	1,683.06750	8	2,011.50833	9	2,337.23417
14	45.93167	4	374.01500	5	702.09833	6	1,030.18167	7	1,358.26500	8	1,686.34833	9	2,014.43167	10	2,342.51500
15	49.21250	5	377.29983	6	705.37917	7	1,036.46250	8	1,361.63583	9	1,689.62917	10	2,017.71250	11	2,349.75863
16	52.49333	6	380.57667	7	708.66000	8	1,036.74333	9	1,364.82667	10	1,692.91000	11	2,020.99333	12	2,351.87917
17	55.74747	7	383.85750	8	711.90483	9	1,040.20417	10	1,368.10750	11	1,696.19083	12	2,024.74717	13	2,352.86767
18	59.50500	8	387.13833	9	715.22167	10	1,043.30500	11	1,371.38833	12	1,699.47167	13	2,027.55200	14	2,355.63833
19	62.33583	9	390.41917	10	718.50250	11	1,046.58833	12	1,374.66917	13	1,702.75250	14	2,030.83583	15	2,358.91917
20	65.16667	120	393.70000	220	721.78333	320	1,049.86667	420	1,377.95000	520	1,706.03333	620	2,034.11667	720	2,392.20000
21	68.396083	1	727.17833	2	728.34500	3	1,053.14750	4	1,384.42250	5	1,712.59000	6	2,040.67833	7	2,397.87500
22	72.17833	2	400.26167	3	403.54250	4	731.62583	5	1,056.79091	6	1,387.79091	7	1,715.87383	8	2,047.59117
23	75.49179	3	406.82333	4	734.90667	5	1,062.99000	6	1,391.07333	7	1,719.15667	8	2,047.40000	9	2,375.32333
24	78.74000	4	302.02883	5	410.10417	6	1,066.27083	7	1,394.35417	8	1,722.43750	9	2,050.52083	10	2,378.60417
25	82.02883	5	413.38500	6	413.46833	7	1,069.55167	8	1,397.63500	9	1,723.71833	10	2,053.80167	11	2,385.18500
26	85.30167	6	416.66833	7	744.79197	8	1,072.83250	9	1,400.19583	10	1,728.99917	11	2,057.08250	12	2,385.15683
27	88.58250	7	419.94667	8	748.03000	9	1,076.13333	10	1,404.19667	11	1,732.28000	12	2,060.63333	13	2,386.44667
28	91.86333	8	419.94667	9	751.40733	10	1,079.39417	11	1,407.46250	12	1,735.56083	13	2,063.64417	14	2,387.72750
29	95.14417	9	423.22750	10	751.31083	11	1,079.39417	12	1,407.46250	13	1,735.56083	14	2,063.64417	15	2,387.72750
30	98.42500	130	426.50833	230	754.59167	330	1,082.67500	430	1,410.78333	530	1,738.84167	630	2,066.92500	730	2,395.00833
31	101.70583	1	429.88197	2	757.87250	3	1,085.95833	4	1,414.03917	5	1,742.12500	6	2,070.02833	7	2,398.28917
32	104.89667	2	433.07000	3	761.15333	4	1,092.51750	5	1,417.60083	6	1,745.48617	7	2,073.48667	8	2,397.67500
33	108.26750	3	436.35083	4	764.43417	5	1,095.79833	6	1,423.88167	7	1,751.96500	8	2,080.04833	9	2,397.13167
34	111.54833	4	439.63167	5	767.71500	6	1,098.08917	7	1,427.10250	8	1,755.24583	9	2,083.32017	10	2,398.42583
35	114.82917	5	442.91250	6	770.95833	7	1,099.07917	8	1,430.44333	9	1,755.52667	10	2,086.61000	11	2,394.69333
36	118.11000	6	446.19333	7	774.22667	8	1,092.36000	9	1,432.70250	10	1,761.80750	11	2,089.90833	12	2,397.47147
37	121.39083	7	449.47417	8	777.55750	9	1,098.90167	10	1,437.00500	11	1,765.08333	12	2,093.17167	13	2,398.33833
38	124.67167	8	452.75000	9	780.83833	10	1,098.92167	11	1,438.00500	12	1,765.24500	13	2,094.242167	14	2,399.33833
39	127.95250	9	456.03583	10	784.11917	11	1,112.20250	12	1,440.28583	13	1,768.36917	14	2,096.45250	15	2,402.55833
40	131.23333	140	459.31667	240	787.40000	340	1,115.48333	440	1,443.56667	540	1,771.65000	640	2,099.73333	740	2,427.81667
41	134.51417	1	462.59750	2	790.68000	3	1,118.64167	4	1,446.77833	5	1,774.93000	6	2,103.04147	7	2,434.07530
42	137.79500	2	465.87833	3	793.26617	4	1,122.04500	5	1,450.18733	6	1,780.21167	7	2,106.29500	8	2,434.37833
43	141.07583	3	469.15917	4	797.22450	5	1,125.45333	6	1,453.49917	7	1,781.49250	8	2,109.56783	9	2,434.69333
44	144.35667	4	472.44000	5	800.52333	6	1,128.60667	7	1,456.69000	8	1,784.77333	9	2,112.85667	10	2,440.94000
45	147.63750	5	475.72083	6	803.80417	7	1,131.88250	8	1,459.97083	9	1,788.05417	10	2,116.13250	11	2,444.23083
46	150.91933	6	479.00167	7	810.36583	8	1,138.44917	9	1,462.23167	10	1,791.33500	11	2,125.50167	12	2,450.78250
47	154.19917	7	482.28250	8	813.64667	9	1,141.73000	10	1,465.52320	11	1,792.61583	12	2,122.69917	13	2,452.14667
48	157.48000	8	485.56333	9	813.64667	10	1,145.01083	11	1,469.81333	12	1,797.88667	13	2,125.98000	14	2,457.34417
49	160.76083	9	488.84147	10	816.92750	11	1,145.10183	12	1,473.09417	13	1,801.801750	14	2,129.22683	15	2,462.452750

50	164.04167	250	820.20833	350	1,148.29167	450	1,476.37500	550	1,804.45333	650	2,132.54167	750	2,460.62500	S50	2,788.70833	1	3,116.79167
1	167.32250	1	823.48917	2	1,151.85332	3	1,482.33667	4	1,811.02000	5	2,135.82250	6	2,463.90583	7	2,795.71931	1	3,120.07250
2	170.60333	2	826.77000	3	1,154.85332	4	1,483.21750	5	1,814.30082	6	2,139.03333	7	2,467.18667	8	2,795.55333	2	3,123.35333
3	173.88417	3	501.96750	4	830.05983	5	1,158.13417	6	1,485.58167	7	2,142.58117	8	2,470.46750	9	2,803.55083	3	3,126.63117
4	177.16500	4	505.44833	5	833.33167	6	1,161.41500	7	1,489.19833	8	2,145.66500	9	2,473.78833	4	2,803.03167	4	3,127.13500
5	180.44583	5	508.52917	6	836.61250	7	1,164.65883	8	1,492.96197	9	1,820.82520	5	2,148.48383	6	2,477.02917	5	2,805.11250
6	183.77267	6	511.81000	7	843.82250	8	1,171.25750	9	1,499.34083	10	1,828.48320	11	2,152.22667	12	2,480.31000	6	2,828.39333
7	187.00750	7	515.09083	8	846.45500	9	1,174.55833	10	1,502.32167	11	1,830.70500	12	2,155.90750	7	2,813.50083	7	3,129.75750
8	190.28833	8	518.37167	9	849.73583	10	1,177.81917	11	1,503.15200	12	1,833.95583	13	2,158.78333	8	2,818.45000	8	3,143.03833
9	193.56917	9	521.65520	10	853.06667	11	1,181.00000	12	1,504.09167	13	1,833.06917	14	2,162.06917	9	2,818.23583	9	3,146.31917
60	196.85000	11	516.0	260	853.01667	260	1,181.10000	460	1,509.18333	560	1,837.26667	660	2,165.63000	760	2,493.43333	860	2,821.51167
1	200.10383	12	528.21417	13	856.29750	14	1,184.38083	15	1,512.46417	16	1,840.54750	17	2,169.63083	18	2,496.71417	1	2,824.79570
2	203.44167	19	531.79500	20	859.57833	21	1,187.66167	22	1,515.45400	23	1,843.88333	24	2,171.91167	25	2,499.99500	2	2,828.07333
3	206.62250	21	534.77883	22	862.85917	23	1,190.94250	24	1,519.02883	25	1,847.10917	26	2,175.19250	27	2,503.27583	3	2,831.35917
4	209.97333	24	538.05667	25	866.14000	26	1,194.22333	27	1,522.30667	28	1,850.39000	29	2,182.47417	30	2,504.56667	4	2,834.64000
5	213.25417	27	541.31950	28	869.42083	29	1,197.50417	30	1,525.58797	31	1,853.67083	32	2,181.75417	33	2,506.82750	5	2,837.92083
6	216.55500	30	544.61833	31	872.72017	32	1,200.78500	33	1,528.66833	34	1,856.95167	35	2,185.03850	36	2,513.18833	6	2,841.20667
7	219.81583	33	547.99017	34	875.98250	35	1,204.06583	36	1,532.14917	37	1,860.76500	38	2,188.51563	39	2,517.36583	7	2,844.18520
8	223.06667	37	551.18000	38	879.26333	39	1,207.34667	40	1,535.33000	41	1,863.51333	42	2,189.76333	43	2,519.68000	8	2,847.76333
9	226.37750	41	554.46083	42	882.54417	43	1,210.62750	44	1,538.71983	45	1,866.79417	46	2,191.39475	47	2,522.96083	9	2,851.04417
70	229.68333	170	557.74167	270	885.370	270	1,213.80333	470	1,541.99167	570	1,870.37500	670	2,198.15833	770	2,526.21677	870	2,854.42633
1	232.99117	1	561.02250	2	889.10583	3	1,217.18917	4	1,545.27250	5	1,873.37583	6	2,201.33917	7	2,529.52250	870	2,857.40283
2	236.22000	2	564.30333	3	892.38667	4	1,220.47000	5	1,548.55333	6	1,876.63667	7	2,204.72000	8	2,530.80333	2	2,858.97000
3	239.50083	3	567.38417	4	895.68750	5	1,223.75083	6	1,551.83417	7	1,879.91750	8	2,208.00833	3	2,536.08417	3	2,862.16500
4	242.78167	4	570.86500	5	898.48433	6	1,227.03167	7	1,555.11500	8	1,883.19833	9	2,211.28167	4	2,539.36500	4	2,867.44833
5	249.06250	5	574.14833	6	902.22917	7	1,230.31200	8	1,558.39883	9	1,886.47917	10	2,214.56250	5	2,542.61583	5	2,874.81250
6	249.33333	6	577.42667	7	905.51000	8	1,233.59333	9	1,561.67667	10	1,889.76000	11	2,217.84333	12	2,545.92667	6	2,874.01000
7	252.62417	7	580.70750	8	908.79083	9	1,236.87417	10	1,564.57500	11	1,893.04083	12	2,221.12417	13	2,552.20750	7	2,877.29083
8	255.90500	8	583.98833	9	912.07167	10	1,240.15500	11	1,568.32933	12	1,895.32167	13	2,224.57167	14	2,552.48833	8	2,880.57167
9	259.15853	9	587.387	9	915.15230	10	1,243.43583	11	1,571.51917	12	1,899.60250	13	2,227.68583	14	2,555.76917	9	2,883.35583
80	262.46667	180	590.55000	280	918.63333	380	1,246.71667	480	1,574.80000	580	1,902.88333	680	2,230.96667	780	2,559.05000	880	2,887.13333
1	265.77250	1	591.81417	2	921.91417	3	1,253.27833	4	1,575.08000	5	1,906.16417	6	2,234.47350	7	2,565.61167	1	2,893.69200
2	269.02833	2	597.11167	3	925.39250	4	1,258.49500	5	1,581.66167	6	1,909.44500	7	2,237.28283	8	2,565.81250	2	2,895.72733
3	272.30917	3	599.72667	4	928.47583	5	1,261.55917	6	1,584.49450	7	1,912.75283	8	2,240.80917	3	2,568.89250	3	2,896.57017
4	275.50000	4	603.67933	5	931.75667	6	1,269.84000	7	1,587.23233	8	1,916.00667	9	2,244.09000	4	2,572.17333	4	2,900.25667
5	278.80783	5	606.95417	6	935.03720	7	1,263.12083	8	1,591.20417	9	1,919.28750	10	2,247.57083	5	2,575.45417	5	2,903.33550
6	282.15167	6	610.23200	7	941.31833	8	1,266.40167	9	1,594.43583	10	1,922.56833	11	2,250.65167	12	2,578.75000	6	2,906.81533
7	285.42250	7	613.51833	8	941.59197	9	1,269.62850	10	1,597.76583	11	1,925.18000	12	2,253.33230	13	2,582.57500	7	2,910.09167
8	288.71333	8	616.79667	9	948.16083	10	1,272.96333	11	1,601.04667	12	1,929.13000	13	2,257.21333	14	2,585.29667	8	2,914.46333
9	291.99417	9	620.07750	10	948.16083	11	1,276.24417	12	1,604.32750	13	1,932.41083	14	2,260.19417	9	2,588.57750	9	2,916.66083
90	295.25500	190	623.35833	290	951.44167	390	1,279.52500	490	1,607.60833	590	1,935.60167	690	2,263.77500	790	2,591.88533	890	2,919.94167
1	298.55583	1	626.39117	2	954.72250	3	1,282.80533	4	1,610.86670	5	1,938.92500	6	2,267.05583	7	2,595.13917	1	2,923.22250
2	301.86667	2	629.92000	3	961.30083	4	1,284.28417	5	1,617.50833	6	1,942.53333	7	2,273.61767	8	2,598.42000	2	2,926.30333
3	305.11750	3	633.20083	4	964.36500	5	1,286.06670	6	1,617.36500	7	1,945.53417	8	2,273.61767	9	2,598.42000	3	2,927.60570
4	308.38333	4	636.48167	5	967.12625	6	1,289.64833	7	1,620.73167	8	1,948.81500	9	2,276.88933	10	2,604.98167	4	2,926.44933
5	311.67917	5	639.76250	6	967.12667	7	1,295.92917	8	1,624.01250	9	1,952.09583	10	2,280.79177	11	2,608.28250	5	2,926.34583
6	314.90000	6	643.04333	7	971.12667	8	1,299.21000	9	1,627.32933	10	1,955.37667	11	2,283.66000	12	2,611.54333	6	2,927.62667
7	318.24083	7	646.32167	8	977.40750	9	1,302.49083	10	1,630.57147	11	1,958.65750	12	2,286.74083	13	2,614.82417	7	2,942.90750
8	321.52167	8	649.60500	9	977.68833	10	1,305.71667	11	1,633.55500	12	1,961.98833	13	2,290.21667	14	2,618.10500	8	2,946.18833
9	324.80250	9	652.88833	9	980.96917	10	1,309.05250	11	1,637.13583	12	1,965.21917	13	2,293.30250	14	2,621.38583	9	2,949.46517

LENGTH—MILES TO KILOMETERS

[Reduction factor: 1 mile = 1.000347219 kilometers]

Miles	Kilo-meters												
0	160.9347	200	321.8694	300	482.8042	400	643.7389	500	804.6736	600	965.6083	700	1,126.5431
1	162.5441	201	323.4788	301	484.4135	401	645.3482	501	806.2830	601	967.2177	701	1,128.1524
2	164.1534	202	325.0881	302	486.0229	402	646.3576	502	807.8923	602	968.8270	702	1,129.7617
3	165.7628	203	326.6975	303	487.6322	403	647.5017	503	809.5017	603	970.4564	703	1,131.3711
4	167.3721	204	328.3068	304	489.1160	404	650.1763	504	811.1110	604	972.0457	704	1,132.9604
5	168.9815	205	329.9162	305	490.8509	405	652.7856	505	812.7203	605	973.6551	705	1,134.5898
6	170.5908	206	331.5255	306	492.4652	406	653.3850	506	814.3297	606	975.2644	706	1,136.1991
7	172.2002	207	333.1349	307	494.0569	407	655.0043	507	815.9390	607	976.8738	707	1,137.8085
8	173.8095	208	334.7442	308	495.6179	408	656.6137	508	817.5484	608	978.4831	708	1,139.4178
9	175.4188	209	336.3536	309	497.2883	409	658.2230	509	819.1577	609	980.0925	709	1,141.0272
10	16.0935	210	337.9629	310	498.8976	410	659.8324	510	820.7671	610	981.7018	710	1,142.6365
11	17.7028	211	339.5723	311	500.5070	411	661.4417	511	822.3764	611	983.3112	711	1,144.2459
12	19.3122	212	340.2166	312	341.1816	412	663.0151	512	823.9858	612	984.9205	712	1,145.8552
13	20.9215	213	341.8662	313	342.7910	413	664.6604	513	825.5951	613	986.5298	713	1,147.4646
14	22.5309	214	343.4656	314	344.4003	414	666.3035	514	827.0045	614	988.1392	714	1,149.0739
15	24.1402	215	345.0749	315	346.0097	415	667.8791	515	828.8138	615	989.7485	715	1,150.6833
16	25.7496	216	346.6843	316	347.5337	416	669.4469	516	830.4232	616	991.3579	716	1,152.2926
17	27.3589	217	348.2936	317	349.2283	417	671.0978	517	832.0325	617	992.9672	717	1,153.9020
18	28.9682	218	349.9030	318	350.8377	418	672.7071	518	833.6419	618	994.5766	718	1,155.5113
19	30.5776	219	351.5123	319	352.4470	419	674.3165	519	835.2512	619	996.1859	719	1,157.1207
20	32.1870	220	353.1217	320	354.0564	420	675.9258	520	836.8606	620	997.7953	720	1,158.7300
21	33.7963	221	354.7311	321	355.6657	421	677.5352	521	838.4694	621	999.4046	721	1,160.3393
22	35.4056	222	356.3404	322	357.2751	422	679.1445	522	840.0792	622	1,001.0140	722	1,161.9487
23	37.0150	223	357.9497	323	358.8844	423	680.7539	523	841.6886	623	1,002.6233	723	1,163.5580
24	38.6243	224	359.5591	324	360.4938	424	682.3632	524	843.2979	624	1,004.2327	724	1,165.1674
25	40.2337	225	361.1684	325	362.1031	425	683.9726	525	844.9073	625	1,005.8420	725	1,166.7767
26	41.8430	226	362.7777	326	363.7125	426	684.6477	526	845.5819	626	1,007.4514	726	1,168.3861
27	43.4524	227	364.3871	327	365.2326	427	687.1913	527	846.1260	627	1,009.6067	727	1,169.9954
28	45.0617	228	365.9864	328	366.9312	428	688.7006	528	847.7353	628	1,010.6701	728	1,171.6048
29	46.6711	229	367.6058	329	369.4752	429	690.4100	529	849.3447	629	1,012.2794	729	1,173.2141
30	48.2804	230	370.1499	330	531.0846	430	692.0193	530	852.0540	630	1,013.8887	730	1,174.6235
31	49.8898	231	370.7592	331	532.6287	431	694.6287	531	854.5634	631	1,015.4981	731	1,176.4238
32	51.4991	232	372.4338	332	534.3033	432	695.2380	532	857.1727	632	1,017.1074	732	1,178.0422
33	53.1085	233	374.0432	333	537.5220	433	696.8473	533	858.7821	633	1,018.7168	733	1,179.6515
34	54.7178	234	375.6525	334	536.5872	434	698.4567	534	859.3914	634	1,020.3261	734	1,181.2669
35	56.3272	235	377.2619	335	539.1313	435	700.0660	535	861.0008	635	1,021.9355	735	1,182.8702
36	57.9365	236	378.8712	336	540.7059	436	701.6754	536	862.6101	636	1,025.5448	736	1,184.4796
37	59.5458	237	380.4806	337	542.3500	437	703.2847	537	864.2195	637	1,026.1542	737	1,186.0889
38	61.1552	238	382.0899	338	543.9024	438	704.8941	538	865.8288	638	1,026.7635	738	1,187.6982
39	62.7645	239	383.6993	339	545.5687	439	706.5034	539	867.4382	639	1,028.3729	739	1,189.3076
40	64.3775	240	385.3086	340	547.1128	440	708.1128	540	869.0475	640	1,029.9322	740	1,190.9169
41	65.9832	241	226.9180	1	387.8527	2	548.7874	1	708.7221	1	1,031.5916	840	1,191.5263
42	67.5926	242	228.5273	2	550.396	2	589.4620	2	872.2662	2	1,033.2009	940	1,192.1356
43	69.2019	243	230.1366	3	552.0061	3	591.0714	3	873.8755	3	1,034.8103	941	1,193.7450
44	70.8113	244	231.7460	4	592.6807	4	714.5502	4	875.4849	4	1,036.4196	942	1,197.3543
45	72.4206	245	233.3553	5	594.2901	5	716.1595	5	877.0942	5	1,038.0290	943	1,198.9637
46	74.0300	246	234.9647	6	596.8341	6	717.7689	6	878.7036	6	1,039.6383	944	1,200.5730
47	75.6393	247	236.5740	7	598.4435	7	719.3782	7	880.3120	7	1,041.2477	945	1,202.1824
48	77.2487	248	238.1834	8	599.1181	8	720.9876	8	881.9223	8	1,042.8570	946	1,203.7917
49	78.8580	249	239.7927	9	600.4725	9	722.5969	9	883.5316	9	1,044.4663	947	1,205.2011

50	80.4674	150	241.4021	250	402.3368	350	563.7215	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	1	403.9461	1	564.8809	1	725.8156	1	885.7503	1	1,047.6850	1	1,208.6198	1	1,369.5345	1	1,530.4892
2	83.6861	2	244.6208	2	405.5555	2	566.4902	2	727.4439	2	887.3239	2	1,048.2344	2	1,209.2291	2	1,371.1638	2	1,533.7079
3	85.2954	3	246.3201	3	407.1648	3	568.0996	3	729.0343	3	889.9680	3	1,050.9037	3	1,211.8385	3	1,372.7732	3	1,535.3172
4	86.9047	4	247.8395	4	408.7742	4	569.7089	4	730.6336	4	891.5784	4	1,052.5131	4	1,213.4478	4	1,374.3825	4	1,535.9266
5	88.5141	5	249.4488	5	410.3895	5	571.3826	5	732.2330	5	893.1877	5	1,054.1224	5	1,215.0527	5	1,375.9919	5	1,538.5086
6	90.1234	6	251.0582	6	411.9299	6	572.3276	6	733.8223	6	894.7971	6	1,055.7318	6	1,216.6655	6	1,377.6012	6	1,540.1453
7	91.7328	7	252.6675	7	413.7022	7	573.4717	7	734.3701	7	895.4064	7	1,057.3411	7	1,218.7578	7	1,379.2106	7	1,541.7546
8	93.3421	8	254.2769	8	415.2116	8	576.1463	8	737.0810	8	898.0157	8	1,058.9035	8	1,219.8832	8	1,380.8199	8	1,543.1067
9	94.9515	9	255.8862	9	416.8209	9	577.7557	9	738.6804	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	574.9091	460	740.2997	560	901.2344	660	1,062.1692	760	1,234.1039	860	1,384.0386	960	1,544.9733
1	98.1702	1	259.1049	1	420.9743	1	580.7474	1	741.9991	1	902.8438	1	1,063.7785	1	1,234.7132	1	1,385.6548	1	1,546.5827
2	99.795	2	260.7142	2	421.6490	2	582.5837	2	743.5184	2	904.4538	2	1,065.3879	2	1,235.3226	2	1,387.2373	2	1,548.1920
3	101.8889	3	262.3336	3	423.2883	3	583.9350	3	745.1278	3	905.0635	3	1,066.9976	3	1,237.9319	3	1,388.8666	3	1,549.8014
4	104.9982	4	263.9329	4	424.8677	4	585.8024	4	746.3761	4	907.6718	4	1,068.6066	4	1,239.5413	4	1,390.4760	4	1,551.4107
5	104.6076	5	265.5423	5	426.4770	5	587.4117	5	749.3465	5	909.2812	5	1,070.2155	5	1,241.1506	5	1,393.0853	5	1,553.6947
6	106.2169	6	267.1516	6	428.0864	6	590.2111	6	749.9558	6	910.8905	6	1,071.8252	6	1,232.7600	6	1,393.3040	6	1,554.6294
7	107.8263	7	268.7610	7	429.6957	7	590.3304	7	751.5652	7	912.4999	7	1,073.4346	7	1,234.3693	7	1,395.3040	7	1,556.2388
8	109.4356	8	270.3703	8	431.3051	8	592.2398	8	753.1945	8	914.1092	8	1,075.0439	8	1,235.9787	8	1,397.9434	8	1,557.6481
9	111.4540	9	271.9797	9	432.9144	9	593.8491	9	754.7388	9	915.1868	9	1,076.6333	9	1,237.5880	9	1,398.5227	9	1,559.4579
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	2	275.1984	1	436.1331	2	598.9772	2	759.6119	2	920.5466	2	1,081.4913	2	1,242.4161	2	1,403.3508	2	1,564.2855
2	115.8730	3	276.8077	2	437.7424	3	598.2865	3	761.2212	3	922.1560	3	1,083.0597	3	1,244.0234	3	1,404.9601	3	1,565.8048
3	117.4823	3	278.4171	3	439.3351	3	600.8959	4	762.8306	4	923.7653	4	1,084.7000	4	1,245.6347	4	1,406.5595	4	1,567.5042
4	119.9716	4	280.0264	4	440.9611	4	601.8959	5	764.4599	5	925.3747	5	1,086.3094	5	1,247.4441	5	1,408.1788	5	1,569.1135
5	120.7010	5	281.6358	5	442.5705	5	603.5052	6	766.0943	6	926.9840	6	1,087.9187	6	1,248.5354	6	1,409.7882	6	1,570.7229
6	122.1304	6	283.2451	6	444.1798	6	605.1145	7	767.6386	7	928.5933	7	1,089.5281	7	1,250.4628	7	1,411.3977	7	1,572.3322
7	123.9197	7	284.8545	7	445.8179	7	608.3332	8	769.2880	8	930.2027	8	1,091.1374	8	1,251.0721	8	1,413.0069	8	1,573.9416
8	126.4529	8	286.4638	8	447.3985	9	609.0079	9	769.8733	9	931.8120	9	1,092.7468	9	1,253.6815	9	1,414.6162	9	1,575.5509
9	127.1384	9	288.0732	9	449.0079	9	610.4926	9	770.4763	9	932.4214	9	1,094.3561	9	1,255.2908	9	1,416.2256	9	1,577.1603
80	128.4748	180	289.6825	280	460.6172	380	611.5519	480	772.4867	580	932.4214	680	1,094.3561	780	1,255.2908	880	1,416.2256	980	1,577.1603
1	130.3571	1	291.2918	1	452.2266	2	593.3051	1	774.0660	1	935.0307	1	1,095.9055	1	1,256.9002	1	1,417.8349	1	1,578.7696
2	131.6651	2	292.8730	2	453.5105	3	595.4453	3	775.7054	2	936.4501	2	1,097.5748	2	1,258.4072	2	1,419.4442	2	1,579.4436
3	133.7758	3	294.5105	3	455.1199	4	597.0291	3	777.3147	3	938.2494	3	1,099.1842	3	1,260.1189	3	1,421.9211	3	1,581.9883
4	135.1832	4	296.1199	4	457.0516	4	597.9893	4	778.9241	4	939.8588	4	1,100.7935	4	1,261.7282	4	1,422.6629	4	1,583.5977
5	136.7945	5	297.7292	5	458.6640	5	619.5987	5	780.5334	5	941.6881	5	1,102.4028	5	1,263.3376	5	1,424.2723	5	1,585.2073
6	138.4039	6	299.3386	6	460.2733	6	621.2080	6	782.1227	6	943.0755	6	1,104.0122	6	1,264.9469	6	1,425.8816	6	1,586.6164
7	140.0132	7	300.9479	7	461.8827	7	622.8174	7	783.7221	7	944.8888	7	1,105.6515	7	1,266.5563	7	1,428.4257	7	1,589.0351
8	141.2226	8	302.5573	8	463.4920	8	624.4267	8	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	465.1013	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	305.3953	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	790.1895	1	951.1242	2	952.7336	1	1,112.0589	2	1,272.9936	1	1,433.9284	1	1,594.9631
2	148.0596	2	308.9847	2	469.9294	2	791.7988	2	953.4082	3	954.3459	3	1,115.2776	2	1,274.6030	2	1,435.5327	2	1,596.4724
3	149.6693	3	310.6040	3	471.5887	3	792.4082	4	955.0175	4	955.5522	4	1,116.8870	4	1,275.2123	4	1,437.1471	4	1,598.0818
4	151.2786	4	312.2134	4	473.1481	4	793.4028	5	956.6629	5	957.5616	5	1,118.4963	4	1,276.8217	4	1,438.7564	4	1,599.6711
5	152.8880	5	313.8227	5	474.7574	5	794.6262	6	959.1709	6	959.1709	6	1,120.1057	6	1,281.0404	5	1,440.3658	5	1,601.3005
6	154.4973	6	315.4321	6	476.3368	6	795.9108	7	959.8456	7	960.7803	7	1,121.7150	7	1,282.7487	6	1,441.9751	6	1,602.9098
7	156.1067	7	317.0414	7	477.9761	7	796.5449	8	960.3202	8	962.3896	8	1,123.3244	8	1,284.2581	7	1,443.5845	7	1,604.5193
8	157.1100	8	318.6507	8	478.5955	8	797.1634	9	961.9438	9	963.9990	9	1,124.9337	9	1,285.3684	8	1,445.1938	8	1,606.1285
9	159.2254	9	320.2601	9	481.1948	9	798.6295	9	962.6482	9	964.6162	9	1,125.9337	9	1,285.3684	9	1,446.8031	9	1,607.7379

Circular of the Bureau of Standards

LENGTH—KILOMETERS TO MILES

[Reduction factor: 1 kilometer=0.6213699495 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	100	62.13699	200	124.27399	300	186.41098	400	248.54798	500	310.68497	600	372.82197	700	434.95896	800	497.05956	900	559.23295
1	62137	62.13699	124.80536	187.03255	200	187.12532	215.51673	249.79072	249.79072	311.92771	2	374.06471	1	435.58033	1	497.71733	1	559.85432
2	1.21274	2.635793	2.125.51673	3.126.13810	3	188.27509	4	251.03346	251.03346	313.17045	3	374.68608	2	436.20270	2	498.38870	2	560.45759
3	1.86410	3.6400110	4	64.62247	4	188.89646	5	189.51783	5	189.51783	6	252.67520	4	375.30747	4	437.44444	4	561.09706
4	2.48548	5.6524384	5	65.86521	6	190.13920	6	190.76057	7	252.89757	6	314.41319	5	376.55019	5	438.68718	4	562.33980
5	3.10685	7.6586522	6	7.37822	7	4.34959	8	191.38495	8	191.38495	9	252.89757	7	315.03456	6	389.30855	7	563.58254
6	4.80781	8.6710795	9	5.59233	9	192.86632	9	192.00331	9	254.14031	9	316.27730	9	378.71715	8	439.72929	8	564.20391
7	8.69918	10.6772932	9	10.6772932	9	129.86632	9	192.86632	9	254.14031	9	316.27730	9	378.71715	8	439.72929	8	564.20391
8	11.86466	12.6772932	9	11.86466	9	136.80802	9	136.80802	9	136.80802	9	254.14031	9	316.27730	9	378.71715	8	439.72929
9	11.80603	13.6772932	9	12.42740	120	74.56439	220	136.70139	320	198.83838	420	260.97538	520	323.11237	620	385.49237	720	447.38636
10	13.04877	14.7518576	1	13.04877	1	193.24765	1	199.45975	1	261.59075	1	323.73371	1	385.87073	1	448.00773	1	510.14473
11	14.29151	15.7518576	2	14.91288	4	17.04987	4	19.18687	4	20.33286	3	262.83949	3	324.55511	2	386.49211	2	448.62910
12	16.76122	17.7518576	5	16.15622	6	17.76124	7	19.49523	5	264.06223	6	326.21922	5	388.35622	6	448.52225	7	507.65025
13	17.76124	18.7518576	8	17.76124	9	20.3.18776	7	20.3.18776	8	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
14	18.76124	19.7518576	9	18.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
15	19.76124	20.7518576	9	19.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
16	20.76124	21.7518576	9	20.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
17	21.76124	22.7518576	9	21.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
18	22.76124	23.7518576	9	22.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
19	23.76124	24.7518576	9	23.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
20	24.76124	25.7518576	9	24.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
21	25.76124	26.7518576	9	25.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
22	26.76124	27.7518576	9	26.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
23	27.76124	28.7518576	9	27.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
24	28.76124	29.7518576	9	28.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
25	29.76124	30.7518576	9	29.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
26	30.76124	31.7518576	9	30.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
27	31.76124	32.7518576	9	31.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
28	32.76124	33.7518576	9	32.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
29	33.76124	34.7518576	9	33.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
30	34.76124	35.7518576	9	34.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
31	35.76124	36.7518576	9	35.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
32	36.76124	37.7518576	9	36.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
33	37.76124	38.7518576	9	37.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
34	38.76124	39.7518576	9	38.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
35	39.76124	40.7518576	9	39.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
36	40.76124	41.7518576	9	40.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
37	41.76124	42.7518576	9	41.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
38	42.76124	43.7518576	9	42.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
39	43.76124	44.7518576	9	43.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
40	44.76124	45.7518576	9	44.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
41	45.76124	46.7518576	9	45.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
42	46.76124	47.7518576	9	46.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
43	47.76124	48.7518576	9	47.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
44	48.76124	49.7518576	9	48.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
45	49.76124	50.7518576	9	49.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
46	50.76124	51.7518576	9	50.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
47	51.76124	52.7518576	9	51.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
48	52.76124	53.7518576	9	52.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
49	53.76124	54.7518576	9	53.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
50	54.76124	55.7518576	9	54.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
51	55.76124	56.7518576	9	55.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
52	56.76124	57.7518576	9	56.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
53	57.76124	58.7518576	9	57.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
54	58.76124	59.7518576	9	58.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
55	59.76124	60.7518576	9	59.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
56	60.76124	61.7518576	9	60.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
57	61.76124	62.7518576	9	61.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6	388.97759	7	446.14362	8	508.28062
58	62.76124	63.7518576	9	62.76124	9	20.3.18776	9	20.3.18776	9	266.40509	6	326.84059	6					

Units of Weight and Measure—Definitions and Tables of Equivalents

31

50	31.06850	150	93.20549	250	155.34249	450	279.61648	750	550	155.75347	650	403.89047	850	466.02746	950	590.30145	
1	31.68887	1	93.82686	2	155.98386	3	217.47048	350	280.	237.75	1	341.75347	1	528.16446	1	590.32282	
2	94.44823	2	156.58523	3	218.20660	4	219.34559	2	280.	932.22	1	404.51184	1	528.7553	1	591.34419	
3	32.93261	3	95.69360	4	157.82797	5	158.44934	6	219.	10196	4	342.37484	2	466.64883	2	592.16556	
4	95.69388	4	162.79893	5	220.58633	6	221.20707	7	282.	72333	3	343.61758	3	405.75438	3	530.02857	
5	34.17335	5	96.83234	6	159.07071	7	221.92097	8	283.	34470	5	344.86032	5	406.97395	4	530.64994	
6	34.79672	6	96.83371	7	159.62908	8	222.57044	9	284.	96607	6	345.48169	6	407.61869	6	531.13431	
7	35.41909	7	97.55508	8	160.31345	9	285.20881	9	285.	72443	7	346.10306	7	408.20606	7	531.12731	
8	36.36346	8	98.17645	9	160.93482	9	285.07181	9	286.	86113	8	346.72443	8	409.98942	8	532.15045	
9	36.66083	9	98.79782	9	160.93482	9	285.20881	9	287.	34380	9	347.34380	9	410.61979	9	533.15342	
60	160	99.41919	260	161.55619	360	223.69315	460	286.	83818	560	660.	104147	660	472.24116	660	596.51515	
1	37.90357	1	100.04036	2	162.17756	3	224.41515	4	286.	45115	5	348.58554	1	410.72554	1	597.13625	
2	100.66193	2	162.79893	3	224.93292	4	287.07292	5	349.	20991	6	349.8128	2	411.34691	2	598.75789	
3	39.14631	3	101.28330	4	225.55720	5	287.69429	6	350.	9732	7	350.98227	3	474.10527	3	598.37926	
4	101.90467	4	164.04165	5	226.17966	6	288.31566	7	350.	45265	8	351.52664	4	412.58965	4	599.00063	
5	40.38905	5	102.52604	6	164.66304	7	226.80003	8	289.	95703	9	351.07402	5	413.21104	5	599.48501	
6	41.01042	6	103.14741	7	165.28441	8	227.42140	9	290.	53840	6	351.99349	6	415.21104	6	598.10638	
7	103.76878	7	165.90578	8	166.52715	9	290.07181	9	291.	42251	9	353.55950	9	415.69650	9	600.24337	
8	104.39015	8	167.14852	9	105.01152	9	105.1152	9	106.	322.77	7	352.31673	8	415.07513	8	600.48612	
9	42.87453	9	105.01152	9	105.1152	9	105.1152	9	106.	28551	9	353.55950	9	415.69650	9	602.10748	
70	43.49590	170	105.63289	270	167.76989	370	229.90688	470	292.	04388	570	416.18087	670	472.41116	770	540.59186	
1	44.11207	1	106.25426	2	168.19126	3	231.3225	4	293.	25662	5	354.80224	1	416.93924	1	541.23232	
2	106.25426	2	166.87563	3	231.41626	4	293.	41462	5	355.42361	2	417.50601	2	541.83460			
3	107.49700	3	169.63400	4	231.77099	5	293.90799	6	356.	44498	7	356.66635	3	418.69160	3	542.45597	
4	108.11837	4	169.77036	5	232.39326	6	294.52936	7	357.	02936	8	356.80335	4	418.94034	4	543.07334	
5	108.73974	5	170.87674	6	109.30137	7	295.15073	8	357.	28772	9	357.56171	5	419.42472	5	603.63871	
6	109.36111	6	171.48981	7	109.98248	8	296.35150	9	358.	72110	0	358.53046	6	420.18308	6	606.45707	
7	109.44449	7	172.1948	8	110.60385	9	110.60385	9	111.	39347	7	358.53046	7	420.65746	7	607.07844	
8	109.44449	8	172.1948	9	111.22522	9	111.22522	9	112.	39347	8	359.15183	8	421.28883	8	607.59381	
9	49.08823	9	111.22522	9	111.22522	9	111.22522	9	112.	36221	9	421.91020	9	484.04719	9	608.32118	
80	49.70960	180	111.84659	280	173.98359	380	236.12058	480	298.	25758	580	360.39457	680	422.53157	780	484.66856	
1	112.46796	1	113.46946	2	175.26335	3	237.69195	4	299.	50332	5	361.01594	1	423.12924	1	548.63392	
2	50.95334	2	113.98933	3	113.71070	4	175.84770	5	300.	12169	6	361.63731	2	423.77431	2	548.18529	
3	51.57271	3	114.32027	4	176.46937	5	300.07464	6	362.	88005	7	362.55668	3	424.39568	3	548.66967	
4	51.95038	4	114.43892	5	114.93344	6	177.71181	7	301.	98044	8	363.07404	4	425.01705	4	549.29104	
5	52.16145	5	115.57481	6	178.33118	7	302.	60717	8	303.22854	5	363.50142	5	425.01705	5	549.91241	
6	53.43782	6	178.95455	7	178.95455	8	303.80914	9	303.	84991	9	365.98890	6	426.38842	6	550.53378	
7	116.19618	7	179.57592	8	116.81755	9	241.71921	9	241.	71921	9	366.12279	7	426.28979	7	551.27715	
8	54.68056	8	179.57592	9	117.43892	9	117.43892	9	118.	39347	8	367.36553	8	427.50233	8	551.77632	
9	55.30193	9	117.43892	9	117.43892	9	117.43892	9	118.	39347	9	368.80690	9	428.12390	9	552.39789	
90	55.92330	190	118.06229	290	180.19729	390	242.3328	490	304.	47128	590	366.60827	690	428.74527	790	490.88226	
1	56.54467	1	118.68166	2	181.44033	3	244.19339	4	305.	71402	5	367.22964	1	431.50363	1	553.64062	
2	57.16604	2	119.30303	3	182.06140	4	244.81976	5	306.	35359	6	368.47238	2	432.46199	2	554.26199	
3	57.77841	3	119.54577	4	182.68277	5	245.44113	6	306.	95676	7	369.09375	3	432.74637	3	554.88336	
4	58.40278	4	120.54577	5	121.16714	6	307.57812	7	309.	19899	8	370.	33649	4	433.36774	4	555.50473
5	59.03015	5	121.16714	6	121.16714	7	308.	82086	8	310.	44223	9	371.57923	5	434.23074	5	556.12610
6	59.65152	6	121.78851	7	121.78851	8	308.	45687	9	310.	44223	9	372.20060	6	435.90455	6	557.36384
7	60.47289	7	122.40988	8	123.03125	9	123.03125	9	124.	40988	8	309.	44223	8	373.63842	8	557.99212
8	60.89426	8	123.03125	9	123.65262	9	123.65262	9	124.	40988	9	310.	06360	9	374.33759	9	558.6158

Circular of the Bureau of Standards

LENGTH—NAUTICAL MILES TO KILOMETERS

[Reduction factor: 1 nautical mile = 1.8532487 kilometers (based on 1 nautical mile = 6080.20 ft.)]

Nautical Kilometers meters	Nautical Kilometers miles	Kilo-meters														
0	100	185.325	200	370.650	300	555.975	400	741.299	500	926.624	600	1,111.949	700	1,297.274	800	1,482.599
1	185.322	187.178	200	372.503	211	557.828	400	743.153	500	928.478	600	1,113.802	700	1,299.127	800	1,482.599
2	3.7065	2.389.031	3	374.356	3.376.209	3	561.534	2	745.006	2	930.115	2	1,115.656	2	1,484.352	
3	5.597	3.190.885	4	376.209	3.376.209	5	563.388	3	746.859	3	932.184	3	1,117.509	3	1,486.305	
4	7.4130	4.192.738	5	378.063	4	563.241	6	748.712	4	934.037	5	1,119.362	4	1,304.687	6	1,490.012
5	9.2662	5.194.591	6	379.916	5	565.241	7	750.566	6	935.891	5	1,121.215	5	1,306.540	6	1,491.065
6	11.195	6.196.444	7	381.769	6	567.094	8	752.419	7	937.744	6	1,123.069	6	1,308.394	7	1,493.718
7	12.9727	7.198.298	8	383.622	7	568.947	9	758.272	8	939.597	7	1,124.922	7	1,310.247	8	1,495.572
8	14.8260	8.200.151	9	385.476	8	570.100	10	760.125	9	941.450	8	1,126.757	8	1,312.100	9	1,497.425
9	16.6792	9.202.004	10	387.329	9	572.654	11	767.979	9	943.304	9	1,128.628	9	1,313.953	9	1,499.278
10	18.5325	110	203.857	11	389.182	12	574.507	13	770.832	14	945.157	15	1,130.482	16	1,315.807	
11	20.3857	12.2390	12	205.564	12	578.214	13	763.538	14	948.863	15	1,132.335	16	1,317.660	17	1,502.985
12	24.0922	13.299.417	13	299.417	13	594.742	14	765.392	15	950.717	16	1,134.188	17	1,319.513	18	1,504.838
13	25.9455	14.211.270	14	211.270	14	596.595	15	581.920	16	952.570	17	1,136.041	18	1,321.366	19	1,506.616
14	27.7987	15.213.124	15	213.124	15	598.448	16	599.098	17	954.423	18	1,139.748	19	1,323.220	20	1,508.544
15	29.6320	16.214.977	16	214.977	16	400.302	17	605.627	17	955.276	18	1,140.601	19	1,325.072	20	1,510.398
16	31.5052	17.216.830	17	216.830	17	402.155	18	567.490	17	958.130	19	1,143.454	18	1,328.779	20	1,514.104
17	33.3585	18.218.683	18	218.683	18	404.008	19	574.638	19	959.983	20	1,145.308	18	1,330.633	19	1,515.957
18	35.2117	19.220.537	19	220.537	19	405.861	20	591.186	19	961.836	21	1,147.161	19	1,332.486	20	1,517.811
20	37.0650	120	222.390	21	407.715	22	593.040	23	778.364	24	963.689	25	1,149.014	26	1,334.339	
21	38.9182	21	224.243	21	409.568	22	594.893	23	780.218	24	965.543	25	1,150.867	26	1,336.192	
22	40.7715	22	226.096	22	411.421	23	606.746	24	782.071	25	967.396	26	1,152.721	27	1,337.570	
23	42.6247	23	227.950	23	413.274	24	598.599	25	783.924	26	969.249	27	1,154.574	28	1,339.899	
24	44.4780	24	229.803	24	415.128	25	600.453	26	784.777	27	971.102	28	1,156.427	29	1,341.752	
25	46.3312	25	231.656	25	416.981	26	602.306	27	787.631	28	972.956	29	1,158.280	30	1,343.605	
26	48.1845	26	233.509	26	418.834	27	604.159	28	789.484	29	974.809	30	1,160.134	28	1,345.459	
27	50.0377	27	235.363	27	420.667	28	606.012	29	791.337	30	976.757	27	1,161.987	28	1,347.312	
28	51.9010	28	237.216	28	422.541	29	607.966	28	793.190	30	978.515	28	1,163.840	29	1,349.165	
29	53.7442	29	239.069	29	424.394	30	609.719	29	795.044	30	980.369	29	1,165.693	30	1,351.018	
30	55.5975	130	240.922	31	426.247	32	611.572	31	796.897	30	982.222	31	1,169.400	32	1,352.725	
31	57.4507	31	242.776	31	613.425	32	628.100	32	798.744	31	984.075	32	1,170.574	33	1,354.375	
32	59.3049	32	244.629	32	629.954	33	631.279	32	800.603	33	985.328	32	1,172.534	33	1,356.228	
33	61.1572	33	246.482	33	631.807	34	633.600	33	802.457	34	987.782	33	1,173.106	34	1,358.431	
34	63.0105	34	248.335	34	633.985	35	804.310	34	804.310	34	989.635	34	1,174.960	35	1,360.285	
35	64.8637	35	250.189	35	635.513	36	806.163	35	991.488	36	1,176.813	35	1,362.138	36	1,347.463	
36	66.7170	36	252.042	36	637.367	37	808.016	36	993.341	37	1,178.666	36	1,363.991	37	1,353.816	
37	68.5702	37	253.895	37	639.220	38	810.870	37	995.195	38	1,180.519	37	1,365.844	38	1,357.494	
38	70.4235	38	255.748	38	641.073	39	811.723	38	997.048	39	1,182.373	38	1,367.698	39	1,358.347	
39	72.2767	39	257.602	39	642.926	39	813.251	39	998.901	39	1,184.226	39	1,369.551	39	1,354.876	
40	74.1299	140	259.455	40	444.780	41	815.105	40	1,000.754	41	1,186.079	40	1,371.404	41	1,356.729	
41	75.9813	41	261.308	41	446.633	42	817.283	41	1,002.608	42	1,187.932	41	1,372.257	42	1,357.375	
42	77.8364	42	263.161	42	448.486	43	819.136	42	1,004.461	43	1,189.786	42	1,375.111	43	1,358.342	
43	79.6897	43	265.015	43	450.339	44	820.989	43	1,006.314	44	1,191.639	43	1,376.964	44	1,359.343	
44	81.5429	44	266.868	44	452.193	44	822.842	44	1,008.167	44	1,193.492	44	1,378.817	44	1,359.467	
45	83.3962	45	268.721	45	454.046	45	824.696	45	1,010.021	45	1,195.345	45	1,380.670	45	1,356.995	
46	84.2494	46	270.574	46	455.899	46	826.549	46	1,011.874	46	1,197.199	46	1,382.524	46	1,357.848	
47	87.1027	47	272.428	47	457.752	47	828.402	47	1,013.727	47	1,199.052	47	1,384.377	47	1,359.027	
48	88.9559	48	274.281	48	459.606	48	830.255	48	1,015.580	48	1,200.905	48	1,386.230	48	1,356.880	
49	90.8062	49	276.134	49	461.459	49	832.109	49	1,017.434	49	1,202.758	49	1,388.083	49	1,357.408	

50	92,6624	150	277,987	250	463,312	350	648,637	450	833,962	550	1,019,287	650	1,204,612	750	1,389,937	850	1,575,261	950	1,760,586
1	94,5157	1	279,841	1	465,165	1	650,490	1	835,815	1	1,021,140	1	1,206,465	1	1,391,790	1	1,577,115	1	1,762,440
2	96,3889	2	281,694	2	467,019	2	652,344	2	837,668	2	1,022,993	2	1,208,318	2	1,393,643	2	1,592,571	2	1,764,293
3	98,2222	3	283,540	3	468,872	3	654,197	3	839,522	3	1,024,847	3	1,210,171	3	1,395,496	3	1,580,821	3	1,766,146
4	100,0754	4	285,400	4	470,725	4	656,050	4	841,375	4	1,026,700	4	1,212,025	4	1,397,350	4	1,582,674	4	1,767,999
5	101,9287	5	287,254	5	472,578	5	657,903	5	843,228	5	1,028,553	5	1,213,878	5	1,398,203	5	1,584,538	5	1,769,853
6	103,7819	6	289,107	6	474,432	6	659,757	6	845,081	6	1,030,406	6	1,215,731	6	1,401,056	6	1,586,381	6	1,771,706
7	105,6352	7	290,960	7	476,285	7	661,610	7	846,935	7	1,032,360	7	1,217,584	7	1,402,909	7	1,588,234	7	1,773,559
8	107,4884	8	292,813	8	478,138	8	663,463	8	849,438	8	1,034,113	8	1,219,438	8	1,404,763	8	1,590,087	8	1,775,412
9	109,3417	9	294,667	9	479,991	9	665,316	9	850,641	9	1,035,966	9	1,221,291	9	1,591,941	9	1,777,266		
60	111,1949	160	296,520	260	867,845	360	852,494	460	855,348	560	1,037,819	660	1,223,144	760	1,408,469	860	1,593,794	960	1,779,119
1	113,0482	1	298,373	1	483,698	1	669,023	1	854,733	1	1,039,673	1	1,224,997	1	1,410,322	1	1,595,647	1	1,780,972
2	114,9014	2	300,226	2	485,551	2	670,876	2	856,204	2	1,041,526	2	1,226,851	2	1,412,176	2	1,597,520	2	1,782,825
3	116,7547	3	302,080	3	487,404	3	672,729	3	859,054	3	1,043,379	3	1,228,704	3	1,414,023	3	1,599,354	3	1,784,678
4	118,6079	4	303,933	4	489,258	4	674,583	4	859,907	4	1,045,232	4	1,230,557	4	1,415,882	4	1,601,207	4	1,786,523
5	120,4612	5	305,786	5	491,111	5	676,436	5	861,761	5	1,047,086	5	1,232,410	5	1,417,735	5	1,603,385	5	1,788,385
6	122,3144	6	307,639	6	492,964	6	678,289	6	863,614	6	1,048,939	6	1,234,264	6	1,419,589	6	1,604,913	6	1,790,238
7	124,1677	7	309,493	7	494,817	7	680,142	7	865,467	7	1,050,792	7	1,236,117	7	1,421,442	7	1,606,767	7	1,792,091
8	126,0509	8	311,346	8	496,671	8	681,961	8	867,320	8	1,052,645	8	1,237,970	8	1,423,295	8	1,608,620	8	1,793,945
9	127,8749	9	313,199	9	498,524	9	683,349	9	869,174	9	1,054,499	9	1,239,823	9	1,425,148	9	1,610,473	9	1,795,798
70	129,7274	170	315,052	270	500,377	370	685,702	470	871,027	570	1,056,352	670	1,241,677	770	1,427,001	870	1,612,326	970	1,797,651
1	131,5439	1	316,906	1	502,330	1	687,355	2	872,880	2	1,056,205	2	1,245,330	2	1,428,855	2	1,616,180	2	1,801,358
2	133,4339	2	318,619	2	504,084	2	689,409	2	874,733	2	1,060,058	2	1,245,383	2	1,430,708	2	1,616,033	2	1,801,321
3	135,3272	3	320,465	3	505,937	3	691,262	3	876,587	3	1,061,912	3	1,247,236	3	1,432,561	3	1,617,836	3	1,805,064
4	137,1404	4	322,465	4	507,790	4	693,115	4	878,440	4	1,063,765	4	1,249,090	4	1,434,414	4	1,619,765	4	1,805,064
5	138,9937	5	324,319	5	509,643	5	694,968	5	880,293	5	1,065,618	5	1,250,943	5	1,436,268	5	1,621,593	5	1,806,917
6	140,8469	6	326,172	6	511,197	6	696,822	6	882,146	6	1,067,324	6	1,257,021	6	1,438,121	6	1,623,446	6	1,807,771
7	142,7001	7	328,025	7	513,050	7	698,675	7	884,000	7	1,069,324	7	1,254,649	7	1,439,974	7	1,625,299	7	1,810,624
8	144,5534	8	329,878	8	515,203	8	700,528	8	885,853	8	1,071,178	8	1,256,503	8	1,441,827	8	1,627,152	8	1,812,477
9	146,4066	9	331,732	9	517,056	9	702,381	9	887,706	9	1,073,031	9	1,258,356	9	1,443,681	9	1,629,006	9	1,814,330
80	148,2399	180	333,585	280	518,910	380	704,235	480	889,559	580	1,074,884	680	1,260,209	780	1,445,534	880	1,630,859	980	1,816,184
1	150,1131	1	335,438	1	520,763	1	706,688	2	891,413	2	1,076,737	2	1,263,916	2	1,447,387	2	1,632,712	2	1,818,037
2	151,9664	2	337,291	2	522,616	2	707,944	2	893,266	2	1,078,591	2	1,264,765	2	1,449,240	2	1,634,565	2	1,819,890
3	153,8196	3	339,145	3	524,469	3	709,794	3	895,119	3	1,080,444	3	1,265,769	3	1,451,094	3	1,636,419	3	1,821,743
4	155,6729	4	340,998	4	526,323	4	711,648	4	896,972	4	1,082,297	4	1,267,622	4	1,452,947	4	1,638,272	4	1,823,597
5	157,5261	5	342,851	5	528,176	5	713,501	5	898,826	5	1,084,150	5	1,269,475	5	1,454,900	5	1,640,125	5	1,825,450
6	159,3794	6	344,704	6	530,029	6	715,354	6	900,679	6	1,086,004	6	1,271,329	6	1,456,653	6	1,641,978	6	1,827,303
7	161,2326	7	346,558	7	531,882	7	717,207	7	902,538	7	1,087,857	7	1,273,182	7	1,458,307	7	1,643,832	7	1,829,156
8	163,0859	8	348,411	8	533,736	8	719,050	8	904,385	8	1,089,710	8	1,275,035	8	1,460,360	8	1,645,665	8	1,831,508
9	164,9391	9	350,264	9	535,589	9	720,914	9	906,239	9	1,091,563	9	1,276,888	9	1,462,213	9	1,647,538	9	1,832,863
90	166,7524	190	352,117	290	537,442	390	722,767	490	908,092	590	1,093,417	690	1,278,742	790	1,464,066	890	1,649,391	990	1,834,716
1	168,6556	1	353,971	1	539,295	1	724,620	2	911,798	2	1,095,270	2	1,280,595	2	1,465,920	2	1,651,255	2	1,836,569
2	170,4989	2	355,824	2	541,149	2	726,473	3	913,652	3	1,098,976	3	1,282,448	3	1,467,773	3	1,653,088	3	1,838,423
3	172,3232	3	357,677	3	543,002	3	728,327	4	915,505	4	1,100,830	4	1,284,301	4	1,469,626	4	1,654,916	4	1,840,276
4	174,2054	4	359,530	4	544,855	4	730,180	5	917,388	5	1,102,683	5	1,286,155	5	1,471,479	5	1,656,804	5	1,842,129
5	176,0886	5	361,383	5	546,708	5	732,033	6	919,866	6	1,104,536	6	1,288,008	6	1,473,333	6	1,658,658	6	1,843,982
6	177,9119	6	363,237	6	548,562	6	733,886	7	921,065	7	1,106,389	7	1,289,861	7	1,475,186	7	1,660,511	7	1,845,826
7	179,7551	7	365,090	7	550,415	7	735,740	8	922,918	8	1,108,243	8	1,293,568	8	1,477,030	8	1,662,364	8	1,847,669
8	181,6184	8	366,943	8	552,268	8	737,593	9	924,771	9	1,110,996	9	1,295,421	9	1,478,092	9	1,664,217	9	1,849,542
9	183,4716	9	368,796	9	554,121	9	739,446	9	924,771	9	1,110,996	9	1,295,421	9	1,480,746	9	1,666,071	9	1,851,395

LENGTH—KILOMETERS TO NAUTICAL MILES

[Reduction factor: 1 kilometer = 0.539593200 nautical mile (based on 1 nautical mile = 6080.20 feet)]

Kilo-Nautical meters miles																			
0 1 0.53959	100 53.9593	200 107.9186	300 161.8779	400 215.8372	500 269.7965	600 323.7558	700 377.7151	800 431.6744	900 485.6337	1000 540.5921	1100 595.5505	1200 650.5089	1300 705.4673	1400 760.4257	1500 815.3841	1600 870.3425	1700 925.2999	1800 980.2573	1900 1035.2140
1 2 0.53959	101 54.4989	201 108.4582	301 162.4175	401 216.3768	501 270.3361	601 324.2954	701 378.2547	801 432.2140	901 486.1733	1001 541.1317	1101 596.0891	1201 651.0464	1301 706.0035	1401 761.9608	1501 816.9182	1601 871.8756	1701 926.8330	1801 981.7904	1901 1036.7472
2 3 0.53959	102 55.0385	202 108.9578	302 162.5571	402 216.5164	502 270.8575	602 324.8350	702 378.1943	802 432.2140	902 486.1733	1002 541.1317	1102 596.0891	1202 651.0464	1302 706.0035	1402 761.9608	1502 816.9182	1602 871.8756	1702 926.8330	1802 981.7904	1902 1036.7472
3 4 0.53959	103 55.5781	203 109.5374	303 163.4967	403 217.4560	503 271.4153	603 325.3746	703 379.3339	803 433.2932	903 487.2525	1003 541.1317	1103 596.0891	1203 651.0464	1303 706.0035	1403 761.9608	1503 816.9182	1603 871.8756	1703 926.8330	1803 981.7904	1903 1036.7472
4 5 0.53959	104 56.1177	204 110.0770	304 164.0363	404 217.9956	504 271.9549	604 325.9142	704 379.8735	804 433.8238	904 487.9721	1004 541.1317	1104 596.0891	1204 651.0464	1304 706.0035	1404 761.9608	1504 816.9182	1604 871.8756	1704 926.8330	1804 981.7904	1904 1036.7472
5 6 0.53959	105 56.6573	205 110.6166	305 164.5759	405 218.5352	505 272.4945	605 326.4538	705 380.4131	805 434.3724	905 488.3317	1005 541.1317	1105 596.0891	1205 651.0464	1305 706.0035	1405 761.9608	1505 816.9182	1605 871.8756	1705 926.8330	1805 981.7904	1905 1036.7472
6 7 0.53959	106 57.1969	206 110.1155	306 165.1155	406 219.0748	506 273.0341	606 326.9934	706 380.9527	806 434.9120	906 488.8713	1006 541.1317	1106 596.0891	1206 651.0464	1306 706.0035	1406 761.9608	1506 816.9182	1606 871.8756	1706 926.8330	1806 981.7904	1906 1036.7472
7 8 0.53959	107 57.7365	207 111.6058	307 165.5551	407 219.6144	507 273.5337	607 327.5320	707 381.0725	807 435.4516	907 489.4109	1007 541.1317	1107 596.0891	1207 651.0464	1307 706.0035	1407 761.9608	1507 816.9182	1607 871.8756	1707 926.8330	1807 981.7904	1907 1036.7472
8 9 0.53959	108 58.2706	208 112.2535	308 166.1946	408 220.1539	508 274.1132	608 328.0318	708 382.5714	808 436.5307	908 490.4900	1008 541.1317	1108 596.0891	1208 651.0464	1308 706.0035	1408 761.9608	1508 816.9182	1608 871.8756	1708 926.8330	1808 981.7904	1908 1036.7472
9 10 0.53959	109 58.8156	209 112.7749	309 166.7342	409 220.6935	509 274.6528	609 328.6121	709 382.5714	809 436.5307	909 490.4900	1009 541.1317	1109 596.0891	1209 651.0464	1309 706.0035	1409 761.9608	1509 816.9182	1609 871.8756	1709 926.8330	1809 981.7904	1909 1036.7472
10 11 0.53959	110 59.3552	210 113.3145	310 167.2738	410 221.2331	510 275.1924	610 329.1517	710 383.1110	810 437.0703	910 491.0296	1010 541.1317	1110 596.0891	1210 651.0464	1310 706.0035	1410 761.9608	1510 816.9182	1610 871.8756	1710 926.8330	1810 981.7904	1910 1036.7472
11 12 0.53959	111 59.8948	211 113.8541	311 167.8134	411 221.7727	511 275.7220	611 329.6913	711 383.6506	811 437.6699	911 491.5692	1011 541.1317	1111 596.0891	1211 651.0464	1311 706.0035	1411 761.9608	1511 816.9182	1611 871.8756	1711 926.8330	1811 981.7904	1911 1036.7472
12 13 0.53959	112 60.4344	212 114.3937	312 168.3530	412 222.3123	512 276.2116	612 330.2309	712 384.1902	812 438.1495	912 492.1088	1012 541.1317	1112 596.0891	1212 651.0464	1312 706.0035	1412 761.9608	1512 816.9182	1612 871.8756	1712 926.8330	1812 981.7904	1912 1036.7472
13 14 0.53959	113 60.9740	213 114.9333	313 168.8926	413 222.8519	513 276.8112	613 330.7705	713 384.7692	813 438.6891	913 492.6484	1013 541.1317	1113 596.0891	1213 651.0464	1313 706.0035	1413 761.9608	1513 816.9182	1613 871.8756	1713 926.8330	1813 981.7904	1913 1036.7472
14 15 0.53959	114 61.5136	214 115.4729	314 169.4322	414 223.3912	514 277.3508	614 331.3101	714 385.6494	814 439.2887	914 493.1880	1014 541.1317	1114 596.0891	1214 651.0464	1314 706.0035	1414 761.9608	1514 816.9182	1614 871.8756	1714 926.8330	1814 981.7904	1914 1036.7472
15 16 0.53959	115 62.0532	215 116.0125	315 169.9718	415 223.9311	515 278.8904	615 331.8497	715 385.8090	815 439.7883	915 493.7276	1015 541.1317	1115 596.0891	1215 651.0464	1315 706.0035	1415 761.9608	1515 816.9182	1615 871.8756	1715 926.8330	1815 981.7904	1915 1036.7472
16 17 0.53959	116 62.5928	216 116.5521	316 170.5114	416 224.4707	516 278.4300	616 332.3893	716 386.3486	816 440.3079	916 494.2672	1016 541.1317	1116 596.0891	1216 651.0464	1316 706.0035	1416 761.9608	1516 816.9182	1616 871.8756	1716 926.8330	1816 981.7904	1916 1036.7472
17 18 0.53959	117 63.1324	217 117.0917	317 171.0510	417 225.0103	517 278.9696	617 332.8289	717 386.8832	817 440.8475	917 494.8068	1017 541.1317	1117 596.0891	1217 651.0464	1317 706.0035	1417 761.9608	1517 816.9182	1617 871.8756	1717 926.8330	1817 981.7904	1917 1036.7472
18 19 0.53959	118 63.6720	218 117.6313	318 171.5906	418 225.5499	518 279.5092	618 333.4685	718 387.4278	818 441.8460	918 495.3464	1018 541.1317	1118 596.0891	1218 651.0464	1318 706.0035	1418 761.9608	1518 816.9182	1618 871.8756	1718 926.8330	1818 981.7904	1918 1036.7472
19 20 0.53959	119 64.2116	219 117.1302	319 172.1302	419 226.0895	519 280.0488	619 334.5477	719 388.5070	819 442.4663	919 496.4256	1019 541.1317	1119 596.0891	1219 651.0464	1319 706.0035	1419 761.9608	1519 816.9182	1619 871.8756	1719 926.8330	1819 981.7904	1919 1036.7472
20 21 0.53959	120 64.7512	220 118.7105	320 172.6698	420 226.6291	520 280.5884	620 334.5477	720 388.5070	820 442.4663	920 496.4256	1020 541.1317	1120 596.0891	1220 651.0464	1320 706.0035	1420 761.9608	1520 816.9182	1620 871.8756	1720 926.8330	1820 981.7904	1920 1036.7472
21 22 0.53959	121 65.2908	221 119.2501	321 173.2094	421 227.1687	521 281.7082	621 335.1087	721 389.0466	821 443.0559	921 497.5047	1021 541.1317	1121 596.0891	1221 651.0464	1321 706.0035	1421 761.9608	1521 816.9182	1621 871.8756	1721 926.8330	1821 981.7904	1921 1036.7472
22 23 0.53959	122 65.8303	222 119.7866	322 174.8285	422 228.2478	522 282.7071	622 336.1664	722 390.1257	822 444.0850	922 497.5047	1022 541.1317	1122 596.0891	1222 651.0464	1322 706.0035	1422 761.9608	1522 816.9182	1622 871.8756	1722 926.8330	1822 981.7904	1922 1036.7472
23 24 0.53959	123 66.3699	223 120.3292	323 174.2885	423 228.7874	523 282.7467	623 336.7065	723 390.7065	823 444.0850	923 498.0443	1023 541.1317	1123 596.0891	1223 651.0464	1323 706.0035	1423 761.9608	1523 816.9182	1623 871.8756	1723 926.8330	1823 981.7904	1923 1036.7472
24 25 0.53959	124 66.9093	224 120.8686	324 174.8281	424 229.7874	524 283.2863	624 337.2456	724 391.2049	824 445.1242	924 498.1525	1024 541.1317	1124 596.0891	1224 651.0464	1324 706.0035	1424 761.9608	1524 816.9182	1624 871.8756	1724 926.8330	1824 981.7904	1924 1036.7472
25 26 0.53959	125 67.4491	225 121.4084	325 175.3677	425 230.3283	525 283.8259	625 337.8259	725 392.7573	825 446.2202	925 498.1525	1025 541.1317	1125 596.0891	1225 651.0464	1325 706.0035	1425 761.9608	1525 816.9182	1625 871.8756	1725 926.8330	1825 981.7904	1925 1036.7472
26 27 0.53959	126 67.9887	226 121.9480	326 175.9073	426 230.4662	526 284.3555	626 338.3248	726 393.7573	826 446.2202	926 498.1525	1026 541.1317	1126 596.0891	1226 651.0464	1326 706.0035	1426 761.9608	1526 816.9182	1626 871.8756	1726 926.8330	1826 981.7904	1926 1036.7472
27 28 0.53959	127 68.5201	227 122.4876	327 176.4469	427 230.9076	527 284.9051	627 338.8644	727 394.4447	827 447.2226	927 501.2819	1027 541.1317	1127 596.0891	1227 651.0464	1327 706.0035	1427 761.9608	1527 816.9182	1627 871.8756	1727 926.8330	1827 981.7904	1927 1036.7472
28 29 0.53959	128 69.0679	228 123.0272	328 176.9865	428 231.4857	528 285.4447	628 339.0440	728 395.4447	828 447.6562	928 501.8215	1028 541.1317	1128 596.0891	1228 651.0464	1328 706.0035	1428 761.9608	1528 816.9182	1628 871.8756	1728 926.8330	1828 981.7904	1928 1036.7472
29 30 0.53959	129 69.6075	229 123.5668	329 177.5261	429 231.9854	529 285.4447	629 339.0440	729 395.4447	829 447.6562	929 501.8215	1029 541.1317	1129 596.0891	1229 651.0464	1329 706.0035	1429 761.9608	1529 816.9182	1629 871.8756	1729 926.8330	1829 981.7904	1929 1036.7472
30 31 0.53959	130 70.1471	230 124.1064	330 178.0657	430 232.0250	530 285.9843	630 339.9436	730 393.9029	830 447.8622	930 501.8215	1030 541.1317	1130 596.0891	1230 651.0464	1330 706.0035	1430 761.9608	1530 816.9182	1630 871.8756	1730 926.8330	1830 981.7904	1930 1036.7472
31 32 0.53959	131 70.6878	231 124.6610	331 178.5053	431 232.5646	531 286.5239	631 340.4425	731 394.4425	831 448.4018	931 502.3007	1031 541.1317	1131 596.0891	1231 651.0464	1331 706.0035	1431 761.9608	1531 816.9182	1631 871.8756	1731 926.8330	1831 981.7904	1931 1036.7472
32 33 0.53959	132 71.2263	232 125.1836	332 179.1449	432 233.0412	532 287.0635	632 341.0228	73												

Units of Weight and Measure—Definitions and Tables of Equivalents

35

50	26.97965	150	80.9389	250	134.8982	350	188.8375	450	242.8168	550	296.7761	650	350.7354	750	404.6947	850	458.6540	950	512.6134
1	27.5924	1	81.4785	2	135.9378	1	189.3971	2	243.3564	1	297.3157	1	351.2750	1	405.2343	1	459.1936	1	513.1529
2	82.0181	2	135.9774	3	189.9367	2	243.8960	3	248.4356	2	297.8553	2	352.2542	2	405.7739	2	459.7332	2	513.6925
3	28.0584	3	82.5157	4	136.5170	3	190.1059	4	244.9752	3	298.3949	4	352.2542	3	406.3135	3	459.7228	3	514.2321
4	29.13802	4	83.0973	5	137.1506	4	191.059	5	245.5148	4	299.4741	5	352.8938	4	406.8531	4	460.8124	4	514.7117
5	29.67762	5	83.6369	6	137.5962	5	191.5055	6	246.0544	6	300.0137	6	353.4334	5	407.3927	5	461.3520	5	513.3113
6	30.22721	6	84.7161	7	138.1338	6	192.0551	7	246.5940	7	300.5533	7	354.5126	6	407.9323	6	461.8916	6	515.8509
7	30.76680	8	85.2557	8	139.2150	8	193.1743	8	247.1236	8	301.0929	9	355.0522	8	409.0115	8	462.9708	8	516.3905
8	31.26330	9	85.7553	9	139.7546	9	193.7339	9	247.6732	9	301.6325	9	355.5918	9	409.5511	9	463.5104	9	517.4597
60	32.37558	160	86.3349	260	140.2942	360	194.2335	460	248.2128	560	302.1721	660	356.1314	760	410.0907	860	464.0500	960	518.0093
1	86.8745	1	140.3338	2	141.3734	2	195.3327	2	249.2920	2	303.2513	2	357.2106	2	411.1699	2	465.1292	2	519.0885
2	33.45477	3	87.4141	3	141.9130	3	195.8723	4	246.4119	4	250.3712	3	303.7939	3	357.562	3	411.7095	3	466.6688
4	34.53395	4	88.4933	4	142.4526	5	196.9314	5	250.9107	5	304.8700	5	358.8293	4	412.2491	4	466.2684	4	520.1677
5	35.07354	5	89.0328	5	142.9921	6	197.4911	6	250.4503	6	305.4096	6	359.3282	5	412.7886	5	466.7479	5	520.7072
6	35.61314	6	89.5724	6	143.3317	7	198.0406	7	251.9393	7	305.9492	7	359.0835	6	413.5678	6	467.8715	6	521.2484
7	36.15273	7	90.1120	7	144.0713	8	144.6109	8	198.5702	8	260.4888	8	306.4481	8	414.4074	7	467.8271	7	521.7864
8	36.69232	8	90.6516	9	145.1505	9	199.1098	9	233.0691	9	360.9877	9	414.9470	9	468.9063	9	522.8656	9	522.8656
9	37.23192	9	91.1912	270	145.6901	370	199.6494	470	253.6087	570	307.5680	670	361.5273	770	415.4866	870	469.4459	970	523.4052
70	37.77151	170	91.7308	270	200.1890	1	200.1890	1	200.2297	1	200.1890	1	308.1076	1	416.0262	1	469.985	1	523.9448
1	38.31110	1	92.2704	2	146.7633	2	200.7236	2	204.6879	2	200.6565	2	416.5658	2	450.5251	2	524.4848	2	524.4848
2	38.86070	2	92.8100	3	147.3089	3	201.2882	3	205.2275	3	209.6472	3	309.1868	3	363.1461	3	417.1054	3	471.0647
3	39.39029	3	93.3496	4	147.8485	4	202.8078	4	205.6761	4	309.7264	4	363.6857	4	417.6450	4	471.0643	4	525.5636
4	39.92988	4	93.8892	5	148.3881	5	202.3474	5	206.3067	5	310.2660	5	364.2253	5	418.1846	5	472.1439	5	526.1032
5	40.46947	6	94.4228	6	148.9277	7	203.4266	7	207.857	6	310.8056	6	364.7649	6	418.7242	6	472.6348	6	527.1824
6	41.00907	7	95.9684	7	149.4773	8	203.9662	8	207.925	7	311.3452	7	365.3045	7	419.2638	7	473.2321	7	527.2220
7	41.58466	8	96.5080	8	150.0069	9	203.9662	8	207.925	8	311.8848	8	365.8441	8	419.8034	8	473.7627	8	528.2615
8	42.08825	9	96.0476	9	150.5657	9	204.5657	9	212.4243	9	312.4243	9	365.8336	9	420.3429	9	474.3429	9	528.2615
9	42.62785	9	96.5871	9	150.4464	9	204.5657	9	212.4243	9	312.4243	9	365.8336	9	420.3429	9	474.3429	9	528.2615
80	43.16744	180	97.1267	280	151.0860	380	205.0453	480	239.0046	580	312.9639	680	366.9232	780	420.8825	880	474.8118	980	528.8014
1	43.70743	1	97.6663	1	151.6236	1	205.5442	1	239.5442	1	313.5035	1	367.4623	1	421.4043	1	475.3814	1	529.3407
2	44.24663	2	98.2059	2	152.1652	2	206.1245	2	250.0838	2	314.0431	2	368.0024	2	421.9617	2	475.9210	2	529.8803
3	44.78622	3	98.7455	3	152.7048	3	206.6641	3	209.6234	3	314.3827	3	368.5420	3	422.5013	3	476.4606	3	530.4199
4	45.32581	4	99.2851	4	153.2444	4	207.2337	4	261.1630	4	315.1223	4	369.0816	4	423.0409	4	477.0002	4	530.9595
5	45.86540	5	99.8247	5	153.7840	6	207.733	5	261.7036	5	315.6619	5	369.6212	5	423.5895	5	477.5398	5	531.4991
6	46.40500	6	100.3643	6	154.3432	7	208.8229	6	262.4422	6	316.7411	6	370.1608	6	424.1201	6	478.0794	6	532.0387
7	46.94459	7	100.9039	7	154.8632	8	209.3628	8	233.3214	8	317.2807	8	371.2400	8	425.1993	7	478.1910	7	532.5783
8	47.48418	8	101.4435	8	155.9428	9	209.9017	9	233.8610	9	317.8203	9	371.7796	9	425.1993	8	479.1586	8	533.1179
9	48.02378	9	101.9831	9	155.9424	9	209.9017	9	233.8610	9	317.8203	9	371.7796	9	425.1993	9	479.6882	9	533.6375
90	48.56337	190	102.5227	290	210.4413	390	210.4413	490	254.4006	590	318.3599	690	372.3192	790	426.2785	890	480.2378	990	534.1971
1	49.12396	1	103.0223	1	157.3216	1	204.9093	1	244.9402	1	318.8935	1	372.5577	1	426.8181	1	480.774	1	534.7367
2	49.64556	2	103.6019	2	157.5612	2	211.5035	2	245.4798	2	319.4891	2	372.3577	2	427.3577	2	481.3170	2	535.2763
3	50.18215	3	104.1414	3	158.1007	4	212.0600	3	246.0193	3	320.5182	4	374.4775	3	428.8972	3	481.8556	3	535.8158
4	50.72174	4	104.6810	4	158.6403	4	212.5996	4	246.5589	4	321.0578	4	375.0171	4	428.4368	4	482.3961	4	536.3554
5	51.26133	5	105.2206	5	159.1799	5	213.1992	5	247.0985	5	321.5567	5	375.5567	5	428.9764	5	482.9357	5	536.8950
6	51.80093	6	105.7602	6	159.7195	6	213.6388	6	247.6381	6	321.5974	6	375.5567	6	429.5160	6	483.4753	6	537.4346
7	52.34052	7	106.2998	7	160.2591	7	214.2184	7	248.1777	7	322.1370	7	376.0963	7	430.0556	7	484.0149	7	537.9742
8	52.88011	8	106.8594	8	160.8597	8	214.7397	8	248.1173	8	322.0765	8	375.6339	8	430.5932	8	484.5545	8	538.5138
9	53.41971	9	107.3790	9	161.3383	9	215.2376	9	248.2569	9	323.2162	9	377.1755	9	431.1348	9	485.0941	9	539.0534

AREA—ACRES TO HECTARES

[Reduction factor: 1 acre = 0.4046872610 hectare]

	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares
0	0	0	100	40.46873	200	80.93745	300	121.40618	400	161.87490	500	202.34363	600	242.81236
1	1	0.40469	2	40.87341	1	81.34214	2	121.81087	1	162.27959	500	1 243.21704	700	283.28108
2	2	0.80937	3	41.27810	2	81.74463	2	122.21555	2	162.68428	2	203.15301	2	243.61737
3	3	1.21406	4	42.08748	3	82.15151	3	122.63024	3	163.08597	3	203.55769	3	244.05612
4	4	1.61875	5	42.49216	4	82.55620	4	123.02493	4	163.49365	4	203.96238	4	244.49514
5	5	2.02344	6	42.89689	5	82.96089	5	123.42961	5	163.98634	5	204.36707	5	244.83579
6	6	2.42812	7	43.30154	6	83.36558	6	124.83430	6	164.30363	6	204.77175	6	245.20498
7	7	2.83250	8	43.70622	7	83.77022	7	124.23999	7	164.70722	7	205.17644	7	245.65157
8	8	3.23550	9	44.11091	8	84.17995	8	124.64368	8	165.11240	8	205.58113	8	246.09835
9	9	3.64219	9	84.79644	9	165.51709	9	125.04836	9	165.98382	9	205.98382	9	246.43454
10	10	4.04687	110	44.51560	210	84.9832	310	125.42178	410	165.92178	510	206.79509	610	246.83923
11	11	4.45156	120	44.93029	1	85.38901	1	125.83774	1	166.22646	1	206.79519	1	247.23292
12	12	4.85625	2	45.32497	2	85.7970	2	126.25243	2	166.73115	2	207.19988	2	247.66860
13	13	5.26093	3	45.72966	3	86.19839	3	126.6671	3	167.13584	3	207.60456	3	248.07329
14	14	5.66562	4	46.13435	4	86.63037	4	127.07180	4	167.34053	4	208.00925	4	248.47793
15	15	6.07031	5	46.53904	5	87.00776	5	127.47449	5	167.94521	5	208.41394	5	248.8267
16	16	6.47500	6	46.94372	6	87.41245	6	127.88117	6	168.34990	6	208.81863	6	249.28735
17	17	6.87956	7	47.33841	7	87.81714	7	128.23586	7	168.75659	7	209.22331	7	250.16077
18	18	7.28337	8	47.73310	8	88.22182	8	128.69055	8	169.1528	8	209.62800	8	250.09673
19	19	7.68906	9	48.15778	9	88.62651	9	129.09524	9	169.56336	9	210.03269	9	250.50141
20	20	8.09735	120	48.56247	220	89.03120	320	129.49992	420	169.96865	520	210.43733	620	250.90610
21	21	8.49312	120	48.96716	220	89.43388	1	129.90461	1	170.77334	1	210.84200	720	251.31079
22	22	8.90312	2	49.37185	2	89.84057	2	130.37993	2	170.77802	2	211.24675	2	292.71538
23	23	9.30781	3	49.77653	3	90.24226	3	130.71390	3	171.18271	3	211.65144	3	252.12016
24	24	9.71928	4	50.18122	4	90.64989	4	131.11957	4	171.58747	4	212.05612	4	252.54845
25	25	10.11718	5	50.53591	5	91.05463	5	131.52336	5	171.99209	5	212.46081	5	253.29254
26	26	10.52187	6	50.99059	6	91.45332	6	131.92825	6	172.39677	6	212.86550	6	253.80295
27	27	10.92556	7	51.39523	7	91.86010	7	132.32723	7	173.20146	7	213.27019	7	253.7891
28	28	11.33124	8	51.79997	8	92.26870	8	132.72742	8	173.20615	8	213.67487	8	254.13360
29	29	11.73933	9	52.20466	9	92.67338	9	133.14211	9	173.61933	9	214.07956	9	254.61233
30	30	12.14662	120	52.60934	230	93.07807	330	133.56860	430	174.01552	530	214.48425	630	254.92979
31	31	12.54531	1	53.01403	1	93.48276	1	133.95148	1	174.12021	1	214.88954	1	255.37766
32	32	12.94995	2	53.41872	2	93.8874	2	134.33617	2	174.22490	2	215.23362	2	255.70235
33	33	13.35468	3	53.82341	3	94.29213	3	134.76986	3	175.22938	3	215.69831	3	265.16701
34	34	13.75337	4	54.22809	4	94.66882	4	135.16555	4	175.33427	4	216.10300	4	256.51712
35	35	14.16605	5	54.63228	5	95.10159	5	135.50723	5	175.38396	5	216.50768	5	256.79161
36	36	14.56674	6	55.03747	6	95.50619	6	136.97492	6	176.43635	6	217.91237	6	257.38110
37	37	14.97443	7	55.44215	7	95.91088	7	136.37961	7	176.44833	7	217.31706	7	257.57579
38	38	15.37812	8	55.84684	8	96.31557	8	136.75429	8	177.55302	8	217.72175	8	258.10047
39	39	15.73280	9	56.23153	9	96.72026	9	137.18398	9	177.65771	9	218.12643	9	258.50516
40	40	16.18749	140	56.65622	240	137.50367	340	177.12494	440	178.05239	540	218.53112	640	258.99985
41	41	16.59918	1	57.00690	1	97.52563	1	177.52653	1	178.46708	1	218.93381	1	259.40453
42	42	16.99686	2	57.45559	2	97.93432	2	178.87177	2	179.34050	2	219.34050	2	260.27975
43	43	17.40155	3	57.87028	3	98.33901	3	180.08732	3	179.74518	3	220.12391	3	260.61860
44	44	17.80242	4	58.21247	4	98.74369	4	181.21242	4	179.88114	4	220.14987	4	261.38202
45	45	18.21093	5	58.67965	5	99.14483	5	181.61711	5	180.08583	5	220.55456	5	261.49201
46	46	18.61561	6	59.03434	6	99.55897	6	180.90552	6	180.90552	6	220.59214	6	261.42797
47	47	19.02630	7	59.89303	7	99.95775	7	180.45648	7	180.89521	7	221.36393	7	261.82266
48	48	19.42999	8	59.83931	8	100.36244	8	181.817	8	181.29989	8	221.68662	8	262.23735
49	49	19.82563	9	60.22940	9	100.76713	9	181.70453	9	181.70453	9	222.17331	9	262.61203

Units of Weight and Measure—Definitions and Tables of Equivalents

37

50	20.23436	60.70309	250	101.17182	450	141.60454	550	222.57799	650	263.04672	750	303.51545	850	343.98417	950	384.45290
1	20.63905	61.10778	1	101.57650	1	142.05253	1	182.11395	1	222.98268	1	303.92013	1	344.33886	1	384.85759
2	21.04374	61.51246	2	101.98115	2	142.44992	2	182.91064	2	223.38737	2	304.73955	2	344.79355	2	385.26227
3	21.44862	61.91175	3	102.38585	3	142.84650	3	183.23233	3	223.79266	3	304.72951	3	345.06923	3	385.66696
4	21.85311	62.32184	4	102.70305	4	143.23929	4	183.28027	4	224.19674	4	264.16547	4	305.13419	4	386.07165
5	22.25780	62.72653	5	103.19525	5	143.63938	5	184.13270	5	225.60143	5	305.53888	5	345.02929	5	447.67632
6	22.66249	63.13121	6	103.59924	6	144.08866	6	184.06112	6	225.47484	6	305.94357	6	346.42320	6	386.88102
7	23.06717	63.53890	7	104.00463	7	144.47335	7	184.94208	7	225.41080	7	265.87953	7	306.34826	7	387.28571
8	23.47186	63.94057	8	104.40381	8	144.83467	8	185.87804	8	225.34679	8	266.28422	8	306.75294	8	387.69040
9	23.87655	64.34227	9	104.81400	9	145.22273	9	185.75145	9	226.22038	9	266.68899	9	307.15763	9	388.09508
60	24.28124	64.74996	260	105.21889	360	145.68741	460	186.15614	560	226.62487	660	267.09359	760	307.56232	860	348.03104
1	65.15465	106.62386	1	146.09210	2	165.46679	2	186.62651	3	227.43275	2	267.9828	1	307.96707	1	388.49977
2	65.55334	106.03286	3	106.43275	3	146.90148	4	163.37020	3	228.83833	3	268.30765	2	308.31769	2	389.30915
3	65.96402	106.38375	4	106.83744	4	147.36616	4	187.77489	4	228.23432	4	268.71234	3	308.77638	3	389.71383
4	66.80998	106.36871	5	107.24212	5	147.70853	5	188.17058	5	228.64890	5	269.11703	4	309.64679	4	390.11852
5	66.77340	107.64681	6	108.05120	6	148.51534	6	188.38216	6	229.05299	6	269.52172	5	309.99044	5	390.53221
6	67.17809	107.75877	7	108.51202	7	148.52022	7	188.38995	7	229.43768	7	269.92640	6	310.45917	6	390.92789
7	67.58277	107.87157	8	108.45619	8	148.79491	9	189.39664	8	229.88236	8	270.31019	7	310.79882	7	391.33558
8	67.98745	108.39260	9	108.86087	9	149.39260	9	189.79333	9	230.00755	9	270.73787	9	311.20450	9	351.67323
9	72.93215	109.39215	170	68.76963	270	109.26556	370	149.73429	470	190.20301	570	230.67174	670	271.14046	770	352.07792
1	69.20152	109.57255	2	69.50821	3	110.47493	3	150.98335	4	191.14170	2	231.46111	1	271.01653	1	352.48260
2	70.15748	109.62150	3	110.47962	3	150.98335	4	191.22176	3	231.85580	3	272.57533	2	352.88729	2	393.35602
3	70.45217	109.61409	4	70.41558	4	151.35304	4	191.22176	4	231.85580	3	272.57533	3	353.19198	3	393.76070
4	70.49686	109.61409	5	70.82027	5	111.28900	5	151.75772	5	192.22545	5	232.69518	4	273.22794	4	353.16957
5	70.31154	71.62965	6	71.22496	6	111.69363	6	152.15241	6	192.33114	6	233.05966	5	273.62263	5	354.10135
6	70.76623	71.62965	7	71.62965	7	152.57170	7	192.56205	7	233.50455	6	273.97238	7	354.91747		
7	71.60992	72.03433	8	71.62965	8	152.91710	8	193.44051	8	233.90924	8	274.37796	8	355.31142		
8	71.56551	72.43902	9	72.43902	9	153.4420	9	193.43677	9	234.31392	9	274.78265	9	356.18683		
9	72.97029	72.97029	180	72.84371	280	113.31243	380	153.73116	480	194.24939	580	234.17861	680	275.18734	780	356.12479
1	72.77967	73.24339	1	73.24339	1	113.71212	1	154.15585	1	194.05457	1	235.12320	1	275.59202	1	356.52948
2	73.18436	73.65508	2	73.65508	2	114.12181	2	154.50553	2	195.0526	2	235.52799	2	275.99671	2	356.84654
3	73.58904	74.05777	3	74.05777	3	114.52619	3	154.49522	3	195.46935	3	235.92567	3	276.40140	3	357.38385
4	73.93373	74.46246	4	74.46246	4	114.93113	4	155.39991	4	195.86663	4	236.33726	4	276.80009	4	357.74554
5	74.38942	74.86714	5	74.86714	5	115.33587	5	155.80460	5	196.77332	5	237.14673	5	277.21077	5	358.14823
6	74.80310	75.27183	6	75.27183	6	115.72780	6	156.20928	6	196.7801	6	237.15146	6	278.08419	6	358.61695
7	75.20779	75.67552	7	75.67552	7	116.14524	7	156.63397	7	197.08238	7	237.55172	7	278.02015	7	358.48887
8	75.61248	76.08121	8	76.08121	8	116.54993	8	157.08166	8	197.58738	8	237.95611	8	278.42884	8	358.83336
9	76.01717	76.48589	9	76.48589	9	116.95462	9	157.49334	9	197.69207	9	238.36080	9	278.82952	9	359.26825
90	36.42165	190	76.89058	290	117.35931	390	157.88093	490	198.29676	590	238.76568	690	279.23421	790	310.17166	
1	36.82655	191	77.29277	291	117.73939	1	158.22772	1	199.10454	1	239.17057	1	279.10762	1	360.57035	
2	37.28123	192	77.69995	292	118.16888	2	158.63741	2	199.10613	2	239.54746	2	280.04538	2	360.91045	
3	37.63592	193	78.10464	293	118.57337	3	159.04209	3	199.51082	3	239.97955	3	281.38572	3	361.85454	
4	38.04060	194	78.50933	294	118.97805	4	159.44678	4	199.91551	4	240.38423	4	280.85296	4	361.70041	
5	38.44520	195	78.91402	295	119.38274	5	159.85147	5	199.91402	5	240.78982	5	281.25767	5	362.19510	
6	38.84998	196	79.31870	296	119.79743	6	160.25616	6	200.72488	6	241.19361	6	281.66233	6	362.50979	
7	39.24666	197	79.72339	297	120.19212	7	160.66884	7	201.20257	7	241.56829	7	282.05102	7	363.04047	
8	39.65935	198	80.12808	298	120.59680	8	161.05533	8	201.33262	8	242.00258	8	282.47171	8	363.48789	
9	40.06404	199	80.53276	299	121.00149	9	161.47022	9	201.93894	9	242.40767	9	282.87640	9	363.81385	

Circular of the Bureau of Standards

AREA—HECTARES TO ACRES

[Reduction factor: 1 hectare = 2.471043930 acres]¹

		Hectares Acres				Hectares Acres				Hectares Acres				Hectares Acres			
		Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres
0	100	247.10439	494.20879	300	741.31318	400	988.41757	500	1,235.52197	600	1,482.62636	700	1,729.73075	800	1,976.83514	900	2,223.93954
1	2.47104	249.57544	496.76983	1	743.7842	1	990.88862	1	1,237.98301	1	1,485.99440	1	1,734.67284	2	1,981.77273	1	2,226.41058
2	4.94209	252.04648	500.15087	2	746.25527	2	993.59666	2	1,240.46405	2	1,487.65845	2	1,734.11388	3	1,984.24828	2	2,228.88163
3	7.41313	254.51752	501.62192	3	748.72631	3	995.83070	3	1,242.95510	3	1,490.03949	3	1,737.11388	4	1,984.24828	3	2,231.35267
4	9.88118	256.98861	502.09296	4	751.19735	4	998.10245	4	1,245.40614	4	1,492.51053	4	1,739.61493	4	1,986.71932	4	2,231.35267
5	12.35226	259.45691	503.03505	5	506.56401	5	999.66840	5	1,000.72729	5	1,247.87718	5	1,494.98158	5	1,742.05897	5	1,989.19036
6	14.82626	261.93066	504.00526	6	750.13944	6	1,003.24384	6	1,250.38283	6	1,497.52662	6	1,744.55701	6	1,991.68141	6	2,236.29476
7	17.29739	264.40170	505.56609	7	511.56069	7	1,005.71488	7	1,252.81927	7	1,498.02367	7	1,747.52806	7	1,994.13245	7	2,241.23684
8	19.76833	266.87274	506.08153	8	761.97714	8	1,008.18592	8	1,255.29032	8	1,502.98471	8	1,749.49910	8	1,996.66350	8	2,243.70789
9	22.3940	269.34379	507.65257	9	763.55257	9	1,010.65697	9	1,257.76136	9	1,504.86575	9	1,751.97015	9	1,999.07454	9	2,246.17893
10	27.18144	271.81463	510.02362	110	718.91923	110	1,013.28906	510	1,260.23240	610	1,507.33680	710	1,754.41119	810	2,001.54558	910	2,248.61998
1	29.65253	274.56769	523.86131	1	721.39027	1	1,015.59906	1	1,262.70345	1	1,509.80784	1	1,756.91223	1	2,004.01663	1	2,251.12102
2	32.13257	279.22796	526.33236	2	727.66751	2	1,018.07010	2	1,265.17449	2	1,512.27889	2	1,759.33328	2	2,006.48767	2	2,253.59206
3	34.59462	281.69901	528.80340	3	773.43675	3	1,020.54110	3	1,267.64554	3	1,514.74993	3	1,761.85432	3	2,008.98782	3	2,256.06331
4	37.06566	284.17005	531.27444	4	775.90779	4	1,023.01219	4	1,270.11658	4	1,517.22997	4	1,764.32537	4	2,011.42976	4	2,258.53415
5	39.5670	286.64110	533.74549	5	778.37884	5	1,025.48323	5	1,272.58762	5	1,519.69202	5	1,766.76941	5	2,013.90080	5	2,261.26120
6	42.00775	289.11214	534.21653	6	780.84986	6	1,027.95427	6	1,275.05867	6	1,522.16306	6	1,769.26745	6	2,016.37185	6	2,263.47624
7	44.27478	291.58318	535.68755	7	783.32093	7	1,030.42532	7	1,277.52977	7	1,524.63411	7	1,771.20954	7	2,018.82899	7	2,265.47428
8	46.94983	294.05423	541.15862	8	785.79197	8	1,032.08963	8	1,280.00076	8	1,527.10515	8	1,774.31394	8	2,021.31894	8	2,268.41833
9	50.02327	296.52527	543.62966	9	788.26301	9	1,035.36741	9	1,282.47180	9	1,529.57619	9	1,776.68059	9	2,023.78937	9	2,270.88937
20	49.42088	120	510.02362	320	790.73406	420	1,037.83845	520	1,284.94284	620	1,532.04724	720	1,779.15163	820	2,026.25602	920	2,273.36042
1	51.89192	298.99632	548.50701	1	793.20510	1	1,040.78054	1	1,287.41389	1	1,534.18188	1	1,784.93727	1	2,027.72707	1	2,278.30252
2	54.32979	301.46736	549.57175	2	795.67615	2	1,042.78054	2	1,289.88493	2	1,536.99392	2	1,784.09372	2	2,031.18611	2	2,278.30252
3	56.83401	303.93840	551.04280	3	798.14719	3	1,045.25158	3	1,292.35598	3	1,539.64637	3	1,786.56476	3	2,032.77355	3	2,283.24459
4	59.30505	306.40949	553.13184	4	800.61283	4	1,047.72263	4	1,294.82702	4	1,541.93141	4	1,789.03581	4	2,036.14020	4	2,283.44590
5	61.77610	308.88049	555.94848	5	803.08938	5	1,050.19867	5	1,297.29806	5	1,544.40246	5	1,791.50685	5	2,038.61124	5	2,285.71564
6	64.24714	311.55154	560.56032	6	805.56032	6	1,052.74015	6	1,299.79311	6	1,546.47350	6	1,793.97789	6	2,041.02229	6	2,288.18668
7	66.71819	313.22528	560.92697	7	808.03137	7	1,053.13576	7	1,302.74015	7	1,549.44545	7	1,796.44894	7	2,043.55333	7	2,290.65772
8	69.18923	316.29247	563.38902	8	810.50245	8	1,057.66680	8	1,304.71120	8	1,551.81559	8	1,798.19998	8	2,045.4437	8	2,293.12887
9	71.66027	318.76467	565.86906	9	812.97345	9	1,059.97785	9	1,307.18224	9	1,554.28663	9	1,801.39103	9	2,048.49542	9	2,295.59981
30	74.13132	130	321.23571	230	568.34010	430	1,015.44450	530	1,062.54880	630	1,309.65328	730	1,803.86207	830	2,050.96646	930	2,298.07086
1	76.60236	132	323.70675	1	570.81115	1	817.91534	1	1,065.01993	1	1,312.14333	1	1,559.22872	1	2,053.43751	1	2,300.54190
2	79.07341	326.17780	573.09263	2	573.78130	2	820.36858	2	1,067.70908	2	1,314.55037	2	1,561.69976	2	2,055.98855	2	2,301.01943
3	81.54454	328.64884	575.73219	3	572.85765	3	822.65753	3	1,069.96202	3	1,317.06641	3	1,564.17081	3	2,058.37959	3	2,305.48399
4	84.01549	331.11889	578.22425	4	825.32867	4	1,072.43307	4	1,319.53746	4	1,566.64485	4	1,813.74624	4	2,060.88064	4	2,307.96503
5	86.48554	333.59933	580.60532	5	827.59792	5	1,074.90411	5	1,322.08850	5	1,569.17429	5	1,816.47279	5	2,063.32168	5	2,310.42670
6	86.95758	336.06197	583.16637	6	830.37515	6	1,076.40985	6	1,324.47955	6	1,571.36394	6	1,818.68633	6	2,065.72373	6	2,312.89712
7	91.42863	338.53302	585.63741	7	832.74180	7	1,079.84620	7	1,326.95205	7	1,576.31263	7	1,821.15938	7	2,068.33616	7	2,317.83921
8	93.89967	341.00406	588.10846	8	835.21285	8	1,082.31724	8	1,329.42163	8	1,576.32603	8	1,823.63042	8	2,070.74841	8	2,317.83921
9	96.37071	343.47511	590.57950	9	837.68389	9	1,084.78829	9	1,331.88268	9	1,578.99707	9	1,826.10146	9	2,076.25866	9	2,320.31025
40	98.84176	140	345.94615	240	593.05054	440	1,040.15494	540	1,334.36372	640	1,581.46812	740	1,828.25675	840	2,075.67690	940	2,327.78129
1	101.31280	348.17119	595.51259	1	597.90263	1	1,089.70397	1	1,336.83497	1	1,582.93916	1	1,831.04255	1	2,078.17079	1	2,325.25234
2	103.78583	350.88824	599.36402	2	605.49707	2	1,092.20180	2	1,339.30581	2	1,583.61020	2	1,833.51460	2	2,080.61899	2	2,327.72338
3	105.35928	353.43637	600.93191	3	607.93472	3	1,094.67246	3	1,341.77685	3	1,588.88125	3	1,833.98684	3	2,082.30003	3	2,330.19443
4	108.72593	355.63033	602.93472	4	850.03911	4	1,097.43450	4	1,344.24790	4	1,591.35229	4	1,838.45686	4	2,085.56108	4	2,332.66547
5	111.19698	358.30317	605.40756	5	852.51016	5	1,098.61455	5	1,346.71894	5	1,593.32334	5	1,840.92773	5	2,088.32312	5	2,335.13651
6	113.66802	360.77241	607.86781	6	854.18990	6	1,099.02559	6	1,349.18999	6	1,596.22048	6	1,843.38677	6	2,090.50317	6	2,337.60756
7	116.19906	363.24346	610.34785	7	857.45224	7	1,104.55664	7	1,351.66103	7	1,598.86982	7	1,845.86982	7	2,092.97421	7	2,340.57560
8	118.61011	365.11550	612.81889	8	859.92339	8	1,107.02768	8	1,354.13207	8	1,601.23647	8	1,847.34086	8	2,095.44525	8	2,345.56965
9	121.08115	366.18555	615.28994	9	862.39453	9	1,109.49874	9	1,356.60315	9	1,603.70751	9	1,850.81190	9	2,097.91630	9	2,346.02069

50	123.55220	250	617.76098	350	864.86538	450	1,111.96977	550	1,359.07416	650	1,606.17855	750	1,853.28295	850	2,100.38734	950	2,347.49793
51	126.03324	1	373.12763	1	620.23203	1	867.33642	1	1,114.44081	1	1,361.54521	1	1,608.64660	1	1,855.73399	1	2,102.85543
	2	375.59668	2	622.70307	2	869.80746	2	1,116.91186	2	1,364.01625	2	1,611.12064	2	1,855.22504	2	2,105.32943	
	3	130.96533	3	725.17411	3	872.28751	3	1,119.38290	3	1,366.48729	3	1,613.59167	3	1,860.66908	3	2,107.80047	
	4	133.49537	4	80.34077	4	874.74955	4	1,121.85394	4	1,368.9834	4	1,616.06273	4	1,863.16712	4	2,110.27152	
	5	383.01181	5	630.11662	5	875.12429	5	1,124.32495	5	1,371.49398	5	1,618.53377	5	1,865.63817	5	2,112.74556	
	6	385.38285	6	632.58720	6	879.69164	6	1,126.79603	6	1,373.07147	6	1,621.00882	6	1,868.10921	6	2,115.15600	
	7	387.05390	7	635.16268	7	882.16268	7	1,128.26708	7	1,376.84251	7	1,623.47586	7	1,870.58026	7	2,117.86904	
	8	143.30555	8	390.12494	8	884.63373	8	1,131.73812	8	1,378.84251	8	1,625.44691	8	1,873.05130	8	2,120.15659	
	9	145.79159	9	392.89598	9	887.10477	9	1,134.20916	9	1,381.33356	9	1,628.41795	9	1,875.52234	9	2,122.62674	
60	148.28264	160	395.36703	260	642.47142	360	889.57581	460	1,136.68021	560	1,385.78460	660	1,630.88594	760	1,877.99339	860	2,127.56882
	1	391.35807	1	644.94247	1	892.04986	1	1,139.15125	1	1,388.27564	1	1,633.25564	1	1,880.44643	1	2,127.67327	
	2	153.20472	2	400.380912	2	844.51709	2	1,141.62230	2	1,388.72659	2	1,635.83108	2	1,882.93547	2	2,130.03987	
	3	165.7577	3	402.78016	3	866.98895	3	1,144.09334	3	1,391.1973	3	1,638.02123	3	1,885.40652	3	2,132.51061	
	4	158.16481	4	405.25120	4	869.45999	4	1,146.56348	4	1,393.66878	4	1,640.77317	4	1,887.87756	4	2,134.81916	
	5	160.67786	5	654.82664	5	901.93103	6	1,149.03543	6	1,395.13982	5	1,643.2421	5	1,894.55739	5	2,137.02844	
	6	163.08900	6	610.19329	6	657.29779	6	904.40203	6	1,151.50647	6	1,398.61086	6	1,892.81965	6	2,139.92040	
	7	165.59994	7	412.65354	7	659.78972	7	906.87312	7	1,155.77552	7	1,401.08191	7	1,648.71526	7	1,897.39099	
	8	168.03099	8	415.33538	8	662.29977	8	909.34476	8	1,156.44856	8	1,403.52395	8	1,650.56535	8	1,904.96153	
	9	170.50203	9	417.60642	9	664.71082	9	911.81521	9	1,158.1960	9	1,406.04040	9	1,653.12839	9	1,901.97052	
70	172.97308	170	420.07747	270	667.18186	370	914.28625	470	1,161.39065	570	1,408.49504	670	1,655.59943	770	1,902.70383	870	2,149.80822
	1	442.54551	1	669.66761	1	919.22834	2	1,166.33273	2	1,413.47013	2	1,660.34152	2	1,907.64591	2	2,154.75301	
	2	177.95156	2	425.01956	2	672.12395	3	921.69939	3	1,168.20378	3	1,663.01257	3	1,910.11196	3	2,157.22335	
	3	180.36261	3	427.49060	3	674.58499	4	924.17043	4	1,171.37292	4	1,665.48361	4	1,912.58800	4	2,159.69240	
	4	182.85725	4	429.46164	4	677.05604	5	926.64147	5	1,173.74587	5	1,667.05665	5	1,915.03905	5	2,162.16544	
	5	185.38289	5	432.33669	5	679.53708	6	632.00812	6	1,176.2161	6	1,670.42570	6	1,918.53009	6	2,169.26783	
	6	187.79934	6	434.90373	6	701.77618	7	931.55356	7	1,178.68795	7	1,675.79235	7	1,920.00113	7	2,176.10553	
	7	190.20738	7	437.34778	7	684.79117	8	934.05461	8	1,181.15070	8	1,678.36578	8	1,925.47218	8	2,181.69571	
	8	192.74143	8	439.45482	8	686.95021	9	936.42126	9	1,183.63004	9	1,680.73444	9	1,924.94322	9	2,172.04761	
	9	195.21247	9	442.31688	9	689.42126	9	938.96020	9	1,185.52565	9	1,687.33883	9	1,929.94922	9	2,179.15201	
80	197.66851	180	444.78791	280	691.98230	380	938.96066	480	1,186.10109	580	1,433.20558	680	1,680.30987	780	1,927.41427	880	2,174.51866
	1	200.15456	1	447.55895	1	694.36334	1	941.46774	1	1,188.57213	1	1,435.67652	1	1,682.78952	1	1,929.88531	
	2	207.62560	2	449.73000	2	696.83439	2	943.93788	2	1,191.04137	2	1,438.1757	2	1,685.22516	2	1,935.46605	
	3	205.09665	3	452.20104	3	699.30593	3	946.40983	3	1,193.41142	3	1,440.61861	3	1,687.27230	3	1,937.28444	
	4	207.56769	4	454.67208	4	701.77618	4	948.80887	4	1,195.98526	4	1,443.08966	4	1,690.19405	4	1,941.40723	
	5	210.38873	5	457.14313	5	704.24752	5	1,001.35191	5	1,198.55631	5	1,692.66509	5	1,939.79849	5	2,186.87888	
	6	212.59798	6	459.61447	6	706.71855	6	1,200.02275	6	1,148.03174	6	1,695.13614	6	1,942.24053	6	2,189.34492	
	7	214.98082	7	462.08521	7	709.18961	7	1,205.39359	7	1,145.50759	7	1,697.60718	7	1,941.71157	7	2,191.81957	
	8	217.45187	8	464.55626	8	711.66065	8	1,205.86944	8	1,145.97383	8	1,700.07832	8	1,947.12626	8	2,194.28701	
	9	219.9291	9	467.02230	9	714.13170	9	1,208.34048	9	1,145.44487	9	1,702.94927	9	1,949.63866	9	2,196.75805	
90	222.33959	190	469.49835	290	716.66274	390	963.70713	490	1,210.81153	590	1,437.91592	690	1,705.02031	790	1,952.12471	890	2,199.22910
	1	224.86300	1	471.44043	1	719.07378	1	966.17818	1	1,213.28275	1	1,430.33696	1	1,707.49336	1	1,954.55757	
	2	227.33604	2	474.44043	2	721.54483	2	968.64922	2	1,215.75361	2	1,432.88301	2	1,709.66240	2	1,957.06759	
	3	239.86709	3	476.31148	3	971.12026	3	1,218.22466	3	1,465.32005	3	1,712.33344	3	1,795.53784	3	2,064.17119	
	4	232.27813	4	479.38252	4	973.59131	4	1,220.69570	4	1,467.80049	4	1,714.90449	4	1,797.00888	4	2,069.11227	
	5	234.74917	5	481.35357	5	976.06235	5	1,223.16675	5	1,470.27114	5	1,717.37553	5	1,964.47992	5	2,074.28482	
	6	237.20222	6	484.32461	6	978.53340	6	1,225.63779	6	1,472.74218	6	1,719.38458	6	1,966.90597	6	2,074.05336	
	7	239.69126	7	486.79565	7	733.90095	7	1,228.10898	7	1,475.21323	7	1,722.81762	7	1,969.42201	7	2,076.52541	
	8	242.16331	8	489.26670	8	736.37109	8	1,230.79888	8	1,477.68427	8	1,724.78666	8	1,971.89306	8	2,078.99475	
	9	244.63335	9	491.73774	9	738.84214	9	1,233.05992	9	1,480.15531	9	1,727.25971	9	1,974.36410	9	2,081.46849	

VOLUME—CUBIC YARDS TO CUBIC METERS

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

Cubic Cubic yards meters																				
0 1 0.76456	100 1 76.45594	240 1 152.91189	300 1 229.36783	400 1 305.82378	500 1 382.27972	600 1 458.73567	700 1 535.19161	800 1 611.42756	900 1 688.10350	1000 1 688.86506	1100 1 688.93262	1200 1 689.39718	1300 1 690.16174	1400 1 691.16174	1500 1 692.16230	1600 1 693.16230	1700 1 693.75668	1800 1 693.94123	1900 1 694.42121	
2 1 1.29212	2 2 1.29368	3 3 1.29506	4 4 1.4101	5 5 1.4101	6 6 1.4101	7 7 1.4101	8 8 1.4101	9 9 1.4101	10 10 1.4101	11 11 1.4101	12 12 1.4101	13 13 1.4101	14 14 1.4101	15 15 1.4101	16 16 1.4101	17 17 1.4101	18 18 1.4101	19 19 1.4101	20 20 1.4101	
3 4 3.05824	5 6 8.22280	7 8 27.8774	9 10 58.00330	11 12 190.63	13 14 316.6381	15 16 483.31	17 18 821.80786	19 20 1.1648	21 22 1.1648	23 24 1.1648	25 26 1.1648	27 28 1.1648	29 30 1.1648	31 32 1.1648	33 34 1.1648	35 36 1.1648	37 38 1.1648	39 40 1.1648	41 42 1.1648	43 44 1.1648
4 5 4.58736	6 7 5.35192	8 9 8.11044	10 11 8.88104	12 13 8.88104	14 15 8.88104	16 17 8.88104	18 19 8.88104	20 21 8.88104	22 23 8.88104	24 25 8.88104	26 27 8.88104	28 29 8.88104	30 31 8.88104	32 33 8.88104	34 35 8.88104	36 37 8.88104	38 39 8.88104	40 41 8.88104	42 43 8.88104	44 45 8.88104
5 6 11.1648	7 8 11.1648	9 9 13.3698	10 10 15.91607	11 11 15.91607	12 12 15.91607	13 13 15.91607	14 14 15.91607	15 15 15.91607	16 16 15.91607	17 17 15.91607	18 18 15.91607	19 19 15.91607	20 20 15.91607	21 21 15.91607	22 22 15.91607	23 23 15.91607	24 24 15.91607	25 25 15.91607	26 26 15.91607	27 27 15.91607
7 8 11.1648	9 9 13.3698	10 10 15.91607	11 11 15.91607	12 12 15.91607	13 13 15.91607	14 14 15.91607	15 15 15.91607	16 16 15.91607	17 17 15.91607	18 18 15.91607	19 19 15.91607	20 20 15.91607	21 21 15.91607	22 22 15.91607	23 23 15.91607	24 24 15.91607	25 25 15.91607	26 26 15.91607	27 27 15.91607	
10 11 7.64559	12 13 7.64559	14 15 8.88104	16 17 8.88104	18 19 8.88104	20 21 8.88104	22 23 8.88104	24 25 8.88104	26 27 8.88104	28 29 8.88104	30 31 8.88104	32 33 8.88104	34 35 8.88104	36 37 8.88104	38 39 8.88104	40 41 8.88104	42 43 8.88104	44 45 8.88104	46 47 8.88104	48 49 8.88104	50 51 8.88104
8 9 8.41015	10 11 8.41015	12 13 8.41015	14 15 8.41015	16 17 8.41015	18 19 8.41015	20 21 8.41015	22 23 8.41015	24 25 8.41015	26 27 8.41015	28 29 8.41015	30 31 8.41015	32 33 8.41015	34 35 8.41015	36 37 8.41015	38 39 8.41015	40 41 8.41015	42 43 8.41015	44 45 8.41015	46 47 8.41015	48 49 8.41015
2 3 9.14741	4 5 9.39297	6 7 10.70383	8 9 10.70383	10 11 10.70383	12 13 10.70383	14 15 10.70383	16 17 10.70383	18 19 10.70383	20 21 10.70383	22 23 10.70383	24 25 10.70383	26 27 10.70383	28 29 10.70383	30 31 10.70383	32 33 10.70383	34 35 10.70383	36 37 10.70383	38 39 10.70383	40 41 10.70383	42 43 10.70383
3 4 10.70383	5 6 12.23295	7 8 12.99751	9 10 13.76207	11 12 13.76207	13 14 13.76207	15 16 13.76207	17 18 13.76207	19 20 13.76207	21 22 13.76207	23 24 13.76207	25 26 13.76207	27 28 13.76207	29 30 13.76207	31 32 13.76207	33 34 13.76207	35 36 13.76207	37 38 13.76207	39 40 13.76207	41 42 13.76207	43 44 13.76207
5 6 11.46389	7 8 11.46389	9 9 12.23295	10 10 12.23295	11 11 12.23295	12 12 12.23295	13 13 12.23295	14 14 12.23295	15 15 12.23295	16 16 12.23295	17 17 12.23295	18 18 12.23295	19 19 12.23295	20 21 12.23295	22 23 12.23295	24 25 12.23295	26 27 12.23295	28 29 12.23295	30 31 12.23295	32 33 12.23295	34 35 12.23295
6 7 12.23295	8 9 12.23295	10 11 12.23295	12 13 12.23295	14 15 12.23295	16 17 12.23295	18 18 12.23295	20 21 12.23295	22 23 12.23295	24 25 12.23295	26 27 12.23295	28 29 12.23295	30 31 12.23295	32 33 12.23295	34 35 12.23295	36 37 12.23295	38 39 12.23295	40 41 12.23295	42 43 12.23295	44 45 12.23295	
12 13 12.23295	14 15 12.23295	16 17 12.23295	18 19 12.23295	20 21 12.23295	22 23 12.23295	24 25 12.23295	26 27 12.23295	28 29 12.23295	30 31 12.23295	32 33 12.23295	34 35 12.23295	36 37 12.23295	38 39 12.23295	40 41 12.23295	42 43 12.23295	44 45 12.23295	46 47 12.23295	48 49 12.23295	50 51 12.23295	
14 15 12.23295	16 17 12.23295	18 19 12.23295	20 21 12.23295	22 23 12.23295	24 25 12.23295	26 27 12.23295	28 29 12.23295	30 31 12.23295	32 33 12.23295	34 35 12.23295	36 37 12.23295	38 39 12.23295	40 41 12.23295	42 43 12.23295	44 45 12.23295	46 47 12.23295	48 49 12.23295	50 51 12.23295	52 53 12.23295	
20 21 15.29119	22 23 15.29119	24 25 15.29119	26 27 15.29119	28 29 15.29119	30 31 15.29119	32 33 15.29119	34 35 15.29119	36 37 15.29119	38 39 15.29119	40 41 15.29119	42 43 15.29119	44 45 15.29119	46 47 15.29119	48 49 15.29119	50 51 15.29119	52 53 15.29119	54 55 15.29119	56 57 15.29119	58 59 15.29119	60 61 15.29119
1 2 16.05715	3 4 16.05715	5 6 16.05715	7 8 16.05715	9 10 16.05715	11 12 16.05715	13 14 16.05715	15 16 16.05715	17 18 16.05715	19 20 16.05715	21 22 16.05715	23 24 16.05715	25 26 16.05715	27 28 16.05715	29 30 16.05715	31 32 16.05715	33 34 16.05715	35 36 16.05715	37 38 16.05715	39 40 16.05715	41 42 16.05715
2 3 16.22031	4 5 16.22031	6 7 16.22031	8 9 16.22031	10 11 16.22031	12 13 16.22031	14 15 16.22031	16 17 16.22031	18 19 16.22031	20 21 16.22031	22 23 16.22031	24 25 16.22031	26 27 16.22031	28 29 16.22031	30 31 16.22031	32 33 16.22031	34 35 16.22031	36 37 16.22031	38 39 16.22031	40 41 16.22031	42 43 16.22031
3 4 17.58387	5 6 18.34943	7 8 19.11389	9 10 19.87855	11 12 19.87855	13 14 19.87855	15 16 19.87855	17 18 19.87855	19 20 19.87855	21 22 19.87855	23 24 19.87855	25 26 19.87855	27 28 19.87855	29 30 19.87855	31 32 19.87855	33 34 19.87855	35 36 19.87855	37 38 19.87855	39 40 19.87855	41 42 19.87855	43 44 19.87855
4 5 18.34943	6 7 18.34943	8 9 18.34943	10 11 18.34943	12 13 18.34943	14 15 18.34943	16 17 18.34943	18 19 18.34943	20 21 18.34943	22 23 18.34943	24 25 18.34943	26 27 18.34943	28 29 18.34943	30 31 18.34943	32 33 18.34943	34 35 18.34943	36 37 18.34943	38 39 18.34943	40 41 18.34943	42 43 18.34943	44 45 18.34943
6 7 18.34943	8 9 18.34943	10 11 18.34943	12 13 18.34943	14 15 18.34943	16 17 18.34943	18 18 18.34943	20 21 18.34943	22 23 18.34943	24 25 18.34943	26 27 18.34943	28 29 18.34943	30 31 18.34943	32 33 18.34943	34 35 18.34943	36 37 18.34943	38 39 18.34943	40 41 18.34943	42 43 18.34943	44 45 18.34943	
8 9 18.34943	10 11 18.34943	12 13 18.34943	14 15 18.34943	16 17 18.34943	18 18 18.34943	20 21 18.34943	22 23 18.34943	24 25 18.34943	26 27 18.34943	28 29 18.34943	30 31 18.34943	32 33 18.34943	34 35 18.34943	36 37 18.34943	38 39 18.34943	40 41 18.34943	42 43 18.34943	44 45 18.34943	46 47 18.34943	
10 11 18.34943	12 13 18.34943	14 15 18.34943	16 17 18.34943	18 18 18.34943	20 21 18.34943	22 23 18.34943	24 25 18.34943	26 27 18.34943	28 29 18.34943	30 31 18.34943	32 33 18.34943	34 35 18.34943	36 37 18.34943	38 39 18.34943	40 41 18.34943	42 43 18.34943	44 45 18.34943	46 47 18.34943	48 49 18.34943	
12 13 18.34943	14 15 18.34943	16 17 18.34943	18 18 18.34943	20 21 18.34943	22 23 18.34943	24 25 18.34943	26 27 18.34943	28 29 18.34943	30 31 18.34943	32 33 18.34943	34 35 18.34943	36 37 18.34943	38 39 18.34943	40 41 18.34943	42 43 18.34943	44 45 18.34943	46 47 18.34943	48 49 18.34943	50 51 18.34943	
14 15 18.34943	16 17 18.34943	18 18 18.34943	20 21 18.34943	22 23 18.34943	24 25 18.34943	26 27 18.34943	28 29 18.34943	30 31 18.34943	32 33 18.34943	34 35 18.34943	36 37 18.34943	38 39 18.34943	40 41 18.34943	42 43 18.34943	44 45 18.34943	46 47 18.34943	48 49 18.34943	50 51 18.34943	52 53 18.34943	
16 17 18.34943	18 18 18.34943	20 21 18.34943	22 23 18.34943	24 25 18.34943	26 27 18.34943	28 29 18.34943	30 31 18.34943	32 33 18.34943	34 35 18.34943	36 37 18.34943	38 39 18.34943	40 41 18.34943	42 43 18.34943	44 45 18.34943	46 47 18.34943	48 49 18.34943	50 51 18.34943	52 53 18.34943	54 55 18.34943	
18 19 18.34943	20 21 18.34943	22 23 18.34943	24 25 18.34943	26 27 18.34943	28 29 18.34943	30 31 18.34943	32 33 18.34943	34 35 18.34943	36 37 18.34943	38 39 18.34943	40 41 18.34943	42 43 18.34943	44 45 18.34943	46 47 18.34943	48 49 18.34943	50 51 18.34943	52 53 18.34943	54 55 18.34943	56 57 18.34943	
20 21 18.34943	22 23 18.34943	24 25 18.34943	26 27 18.34943	28 29 18.34943	30 31 18.34943	32 33 18.34943	34 35 18.34943	36 37 18.34943	38 39 18.34943	40 41 18.34943	42 43 18.34943	44 45 18.34943	46 47 18.34943	48 49 18.34943	50 51 18.34943	52 53 18.34943	54 55 18.34943	56 57 18.34943	58 59 18.34943	
22 23 18.34943	24 25 18.34943	26 27 18.34943	28 29 18.34943	30 31 18.34943	32 33 18.34943	34 35 18.34943	36 37 18.34943	38 39 18.34943	40 41 18.34943	42 43 18.34943	44 45 18.34943	46 47 18.34943	48 49 18.34943	50 51 18.34943	52 53 18.34943	54 55 18.34943	56 57 18.34943	58 59 18.34943	60 61 18.34943	
24 25 18.34943	26 27 18.34943	28 29 18.34943	30 31 18.34943	32 33 18.34943	34 35 18.34943	36 37 18.34943	38 39 18.34943	40 41 18.34943	42 43 18.34943	44 45 18.34943	46 47 18.34943	48 49 18.34943	50 51 18.34943	52 53 18.34943	54 55 18.34943	56 57 18.34943	58 59 18.34943	60 61 18.34943	62 63 18.34943	
26 27 18.34943	28 29 18.34943	30 31 18.34943	32 33 18.34943	34 35 18.34943	36 37 18.34943	38 39 18.34943	40 41 18.34943	42 43 18.34943	44 45 18.34943	46 47 18.34943	48 49 18.34943	50 51 18.34943	52 53 18.34943	54 55 18.34943	56 57 18.34943	58 59 18.34943	60 61 18.34943	62 63 18.34943	64 65 18.34943	
28 29 18.34943	30 31 18.																			

Units of Weight and Measure—Definitions and Tables of Equivalents

41

50	38.22797	150	114.68392	250	191.13986	350	267.59381	450	344.05175	550	420.50769	650	496.96364	750	573.41958	850	649.87553
1	38.92953	1	115.44848	2	191.90442	1	268.36367	1	344.81631	1	421.77225	1	497.73820	2	574.18414	1	650.64099
2	39.57709	2	116.21304	2	192.66838	2	245.03681	2	342.80137	2	422.80137	2	498.94870	2	574.94870	2	650.40465
3	40.52165	3	116.77425	3	193.43354	3	269.88548	3	346.34545	3	423.56933	3	499.25732	3	575.13236	3	652.16921
4	41.28621	4	117.74215	4	194.19810	4	270.6504	4	347.10999	4	423.56933	4	500.02158	4	576.47782	4	652.93377
5	41.80767	5	118.30671	5	194.90265	5	271.41860	5	347.87455	5	424.33949	5	501.76864	5	577.24238	5	653.15427
6	42.18533	6	119.27127	6	195.72722	6	272.18316	6	348.63911	6	425.09305	6	501.55100	6	578.06994	6	654.46289
7	43.57989	7	120.03583	7	196.49178	7	272.94772	7	349.03637	7	425.85961	7	503.31556	7	576.77150	7	654.22744
8	44.34445	8	120.80090	8	197.25634	8	273.71228	8	350.16823	8	426.62417	8	503.08012	8	579.53806	8	655.99200
9	45.10901	9	121.36495	9	198.02090	9	274.47684	9	350.93279	9	427.38873	9	503.84467	9	580.30062	9	656.75656
10	45.87357	160	122.32951	260	198.78546	360	275.24140	460	351.69734	560	431.15329	660	504.69293	760	581.06518	860	657.52112
11	46.3813	1	123.98407	1	199.55092	1	276.00595	1	352.45190	1	438.91985	1	501.32329	1	581.82974	1	658.25598
12	47.40269	2	123.58665	2	197.7052	2	273.23477	2	353.23665	2	439.88241	2	502.18285	2	582.5930	2	659.03024
13	48.16725	3	124.63119	3	201.07913	3	277.35058	3	353.99102	3	440.4697	3	506.72075	3	583.3586	3	659.81480
14	48.91380	4	125.38775	4	201.84369	4	278.29644	4	354.75588	4	431.11153	4	507.66747	4	584.22342	4	660.57936
15	49.69636	5	126.15231	5	202.60620	5	279.06240	5	355.52014	5	432.4203	5	508.4392	5	584.97986	5	673.79986
16	50.46992	6	126.91687	6	203.37281	6	279.82376	6	356.23470	6	432.74065	6	509.19659	6	585.62554	6	662.10848
17	51.25458	7	127.58143	7	204.15737	7	279.59332	7	357.04926	7	433.70521	7	510.96115	7	592.87304	7	663.32898
18	51.90904	8	128.44599	8	204.01519	8	281.35988	8	357.81392	8	434.26975	8	510.72571	8	597.18165	8	663.67690
19	52.75360	9	129.21055	9	205.66849	9	282.12444	9	358.57838	9	435.13432	9	510.49251	9	587.14921	9	664.40216
20	53.51916	170	129.97511	270	206.43105	370	282.88699	470	359.34294	570	435.79388	670	512.25483	770	588.71077	870	665.16772
21	54.28372	1	130.73967	1	207.19561	1	284.61515	1	360.10750	1	436.56344	1	513.09399	1	589.47533	1	670.38280
22	55.04828	2	131.50422	2	207.96017	2	286.8206	2	361.32860	2	437.78395	2	513.73035	2	590.23889	2	666.65854
23	55.81284	3	132.26878	3	208.7473	3	287.63662	3	361.63662	3	438.54851	3	514.30137	3	597.46040	3	677.91634
24	56.57740	4	133.03334	4	209.48920	4	285.94233	4	362.40118	4	438.85172	4	515.31307	4	591.76001	4	684.24956
25	57.34196	5	133.79790	5	210.25385	5	286.70779	5	363.16574	5	439.62168	5	516.07663	5	592.53357	5	688.99515
26	58.10652	6	134.56246	6	211.01841	6	287.47133	6	364.93030	6	440.38624	6	516.82419	6	594.73507	6	696.21002
27	58.87103	7	135.32702	7	211.73297	7	288.23391	7	364.6946	7	441.15080	7	517.66674	7	597.51863	7	696.97458
28	59.63564	8	136.09158	8	212.54753	8	289.00349	8	365.49491	8	441.91536	8	518.37130	8	598.21319	8	697.73914
29	60.40020	9	136.85614	9	213.31209	9	289.76803	9	366.22397	9	442.67979	9	519.13586	9	595.59181	9	672.04775
30	61.16476	180	137.62070	280	214.07664	380	290.53259	480	366.98853	580	443.44448	680	519.90042	780	596.35637	880	672.81221
31	61.92323	1	138.38526	1	214.84120	1	291.39715	1	367.75309	1	444.20504	1	520.66498	1	597.12093	1	673.57667
32	62.69887	2	139.14914	2	215.60576	2	292.66171	2	368.51765	2	445.97360	2	521.43934	2	674.34143	2	707.79388
33	63.45843	3	139.91438	3	216.37032	3	293.28221	3	369.25221	3	447.73516	3	522.19410	3	598.65005	3	751.16193
34	64.22299	4	140.67894	4	217.13488	4	293.90983	4	370.04677	4	446.50271	4	522.59866	4	599.41461	4	675.83269
35	64.98755	5	141.44330	5	217.86944	5	294.35599	5	370.81133	5	447.26728	5	523.73232	5	600.19716	5	676.63511
36	65.75511	6	142.20806	6	218.66400	6	295.11995	6	371.57589	6	448.03183	6	524.46778	6	600.94372	6	677.39967
37	66.51867	7	142.97262	7	219.42836	7	297.34052	7	372.34052	7	449.79359	7	525.23234	7	601.70228	7	678.14237
38	67.28123	8	143.73718	8	220.19312	8	296.84906	8	373.10501	8	449.56695	8	526.01620	8	602.47784	8	678.92879
39	68.04579	9	144.50174	9	220.95768	9	297.41362	9	373.86957	9	450.32551	9	526.78146	9	603.23740	9	679.69335
40	68.81035	190	145.26629	290	221.72224	390	298.17818	490	374.63413	590	451.09007	690	527.54602	790	604.00196	890	680.45791
41	69.5791	1	146.03085	1	222.46866	1	298.94774	1	375.33899	1	451.85463	1	528.31058	1	604.76652	1	681.22247
42	70.33947	2	146.79541	2	223.25136	2	300.70730	2	376.16325	2	452.61919	2	529.07514	2	605.53108	2	682.44297
43	71.10693	3	147.55997	3	224.01592	3	301.47186	3	376.92791	3	453.38275	3	530.82970	3	606.29564	3	682.75158
44	71.86539	4	148.32433	4	224.78048	4	301.23642	4	377.69237	4	454.14331	4	530.60426	4	607.06020	4	683.51614
45	72.63315	5	149.08909	5	225.54504	5	302.00998	5	378.46363	5	454.91287	5	531.36881	5	607.82476	5	684.28075
46	73.39711	6	149.85365	6	226.30960	6	303.53107	6	379.72218	6	455.67743	6	532.13337	6	608.58932	6	685.0982
47	74.16271	7	150.61821	7	227.07416	7	304.29466	8	380.75060	8	456.44199	7	533.88793	7	609.35388	7	686.26577
48	74.92883	8	151.38277	8	227.83871	8	305.05227	9	381.51516	9	457.97111	9	534.42705	9	610.85300	9	687.33894
49	75.69139	9	152.14753	9	228.60327	9	305.05227	9	381.51516	9	457.97111	9	534.42705	9	610.85300	9	687.33894

Circular of the Bureau of Standards

VOLUME—CUBIC METERS TO CUBIC YARDS

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

Cubic meters	Cubic yards												
0	1.307942772	200	261.58855	300	392.38283	400	523.17711	500	653.97139	600	784.75566	700	915.55994
1	132.10222	1	262.89650	1	393.69077	1	524.48503	1	655.27933	1	786.07361	1	916.86788
2	2.61506	2	264.20444	2	394.98272	2	525.79299	2	657.88521	2	787.38155	2	918.17583
3	3.134.71811	3	265.51238	3	396.30665	3	527.00994	3	659.20316	4	789.99743	4	920.79717
4	4.523177	4	136.05605	4	266.32033	4	397.61460	4	528.40888	4	660.51110	5	792.03588
5	6.53971	5	137.33399	5	398.92555	5	529.17822	6	661.81904	6	792.61332	6	923.40760
6	7.84746	6	138.6193	6	400.23049	6	531.02722	7	662.33277	7	793.92116	7	924.10187
7	9.15560	7	139.94988	7	401.53833	7	663.64067	8	664.43493	8	795.22921	8	926.02348
8	10.46554	8	141.25782	8	272.74415	8	402.84637	8	665.74287	9	796.53715	9	927.33143
9	11.77148	9	142.55576	9	404.15432	9	534.94559	9	665.74287	9	796.53715	9	927.33143
10	13.07943	110	143.87370	210	274.66798	310	405.46226	410	535.25654	510	667.05081	610	797.84509
11	14.38737	1	145.18165	1	275.97592	1	406.77020	2	533.46448	1	668.35876	1	799.15303
12	15.60531	2	146.48995	2	277.28387	2	408.07814	2	533.74742	2	669.66570	2	800.40988
13	17.00326	3	147.79753	3	278.59181	3	409.38609	3	540.18036	3	670.97461	3	801.78922
14	18.31120	4	149.10548	4	279.89975	4	410.68943	4	541.48331	4	672.28258	4	803.07636
15	19.61914	5	150.41312	5	281.20770	5	412.00197	5	542.79625	5	673.59053	5	804.38480
16	20.92703	6	151.72136	6	282.51564	6	414.10192	6	544.10149	6	674.89347	6	805.60275
17	22.23530	7	153.02930	7	283.82358	7	414.61766	7	545.41214	7	676.20641	7	807.00569
18	23.54297	8	154.33725	8	285.13152	8	415.92580	8	546.72008	8	678.51436	8	808.38663
19	24.85091	9	155.64519	9	286.43947	9	417.23374	9	548.02802	9	678.82230	9	809.61638
20	26.15886	120	156.95313	220	287.74741	320	418.54169	420	549.33596	520	680.13024	620	810.94525
21	27.46680	1	158.26108	1	289.05535	1	419.81963	1	550.43391	1	681.43318	1	812.22446
22	28.77474	2	159.56902	2	290.36330	2	421.75577	2	551.51835	2	682.47613	2	813.54040
23	30.08268	3	160.87636	3	291.67124	3	422.45522	3	553.52979	3	684.05407	3	814.84235
24	31.39063	4	162.18450	4	292.97918	4	423.77346	4	554.86774	4	685.36201	4	816.16269
25	32.69857	5	163.49285	5	294.28712	5	425.08134	5	555.87568	5	686.64996	5	817.45423
26	34.00695	6	164.80879	6	295.59307	6	426.38934	6	557.18362	6	687.97790	6	818.77218
27	35.31445	7	166.10873	7	296.90308	7	427.69729	7	558.49156	7	688.08012	7	820.87477
28	36.62240	8	167.41667	8	298.21095	8	429.00523	8	559.79551	8	690.53937	8	821.38016
29	37.93034	9	168.72462	9	299.51889	9	430.31317	9	561.10745	9	691.90173	9	822.66600
30	39.23828	130	170.03256	230	300.82684	330	431.62111	430	562.41359	530	693.20967	630	824.00395
31	40.54623	1	171.34050	1	302.44276	1	432.95906	1	563.22333	1	694.51761	1	825.31189
32	41.85417	2	172.64835	2	303.44276	2	434.25700	2	565.03128	2	695.82555	2	826.61983
33	34.16211	3	173.95039	3	304.75061	3	435.54194	3	566.33922	3	697.13350	3	827.97777
34	44.47005	4	175.26433	4	306.05561	4	436.82529	4	567.64716	4	698.44144	4	829.25752
35	45.77800	5	176.57227	5	307.36655	5	438.16083	5	568.95511	5	699.71938	5	830.54365
36	47.08594	6	177.88022	6	308.67479	6	439.48877	6	570.27035	6	700.17533	6	831.85110
37	48.39382	7	179.18816	7	309.98244	7	440.77671	7	571.57059	7	702.36527	7	833.13955
38	49.69160	8	180.49616	8	310.29033	8	442.08466	8	572.87893	8	704.98115	9	835.77543
39	51.00977	9	181.80405	9	312.59832	9	443.33262	9	574.18688	9	704.98115	9	836.56971
40	52.31771	140	183.11199	240	313.90627	340	444.70054	440	575.49482	540	706.28910	640	837.08337
41	53.62565	1	184.41993	1	315.21421	1	446.00839	1	576.90276	1	707.59704	1	838.39132
42	54.93360	2	185.72787	2	316.52215	2	447.31673	2	578.11071	2	708.21093	2	839.69926
43	56.24154	3	187.03582	3	317.83009	3	448.64347	3	579.41865	3	709.21293	3	840.00720
44	57.54948	4	188.34376	4	319.13804	4	449.92321	4	580.72087	4	710.25087	4	841.10259
45	58.85742	5	189.65176	5	320.44595	5	451.24026	5	582.03453	5	712.82881	5	843.63209
46	60.16537	6	190.95964	6	321.75392	6	452.54620	6	583.34248	6	714.13675	6	844.93103
47	61.47231	7	192.25759	7	323.06186	7	453.65092	7	584.65092	7	715.44744	7	845.28937
48	62.78135	8	193.57553	8	324.36981	8	455.16408	8	585.55836	8	716.52564	8	847.34119
49	64.089347	9	194.88347	9	325.67775	9	456.47203	9	587.26630	9	718.06058	9	848.85486

65.39714	150	196,19142	66.70508	350	457,77907	550	719,36552	650	850,16280	750	980,95708	850	1,111,75136	950	1,242,54563
	150	197,49936	68.61302	329,23634	451,58219	651	720,98441	751	851,47074	851	982,57250	951	1,114,05930	1,121,05930	
	150	198,60158	69.32097	329,11524	450,59326	652	721,98441	752	852,77869	952	983,57250	1,121,146,16152			
	150	201,42319	70.60781	330,21747	451,60174	653	723,29235	753	853,08663	953	984,88091	1,121,146,46946			
	150	207,62891	71.39685	333,55411	454,61968	654	724,80630	754	854,08663	954	984,88091	1,121,146,77740			
	150	202,73113	72.44860	334,83335	456,62763	655	725,90824	755	855,70252	955	987,49679	1,121,146,98535			
	150	204,30927	73.366	335,73706	457,62190	656	726,21618	756	856,80104	956	988,80474	1,121,146,99300			
	150	205,34709	73.616	336,14129	458,63357	657	727,24212	757	857,31840	957	990,11268	1,121,146,99969			
	150	206,65496	73.749	337,44928	459,63511	658	728,52412	758	858,62634	958	991,42062	1,121,146,99918			
	150	207,56622	74.203	339,14000	460,63573	659	729,83207	759	859,91342	959	992,72856	1,121,146,99918			
	160	209,27084	74.47557	340,06512	460,63636	660	730,24223	760	994,03651	860	1,124,83078	960	1,255,62506		
	160	210,58719	74.74557	341,37306	461,63636	661	731,75530	761	995,3445	861	1,125,13573	961	1,255,93300		
	160	82,0945	74.88673	342,68105	462,63636	662	732,65384	762	995,85312	862	1,126,14495	962	1,256,14495		
	160	82,40039	74.91947	343,98895	463,63636	663	733,37178	763	997,16606	863	1,129,44889	963	1,259,54761		
	160	82,70334	74.95616	345,26889	464,63636	664	734,67972	764	997,48288	864	1,129,85683	964	1,260,85683		
	160	85,01628	75.08628	346,60483	465,63636	665	735,98767	765	999,76622	865	1,131,30750	965	1,262,16477		
	160	86,34222	75.11850	347,91278	466,63636	666	736,29561	766	999,929	866	1,132,67544	966	1,263,77272		
	160	88,94011	75.16464	349,22072	467,63636	667	737,60355	767	1,000,19211	867	1,133,69838	967	1,264,78066		
	160	90,24805	75.20349	350,52866	468,63636	668	738,91149	768	1,000,50005	868	1,134,59433	968	1,266,08860		
	170	222,35027	370	331,13861	470,63636	669	739,21144	769	1,005,80799	969	1,135,36027	969	1,267,39655		
	170	91,55989	370	334,14455	470,63636	670	740,32166	770	1,007,11593	970	1,137,91021	970	1,268,70449		
	170	92,86394	370	354,43249	471,63636	671	741,53738	771	1,008,43386	971	1,139,10215	971	1,270,01443		
	170	94,17128	370	355,70443	472,63636	672	742,14327	772	997,96034	972	1,140,52610	972	1,271,32037		
	170	95,47982	370	356,95116	473,63636	673	743,45121	773	998,37554	973	1,141,83044	973	1,272,62325		
	170	96,78777	370	357,66838	474,63636	674	744,76115	774	999,52549	974	1,142,34918	974	1,273,93262		
	170	97,09371	370	358,22094	475,63636	675	745,07679	775	1,013,65565	975	1,145,44993	975	1,275,24420		
	170	99,04365	370	359,68426	476,63636	676	746,37504	776	1,014,95339	976	1,146,55155	976	1,276,55187		
	170	100,71159	370	360,19793	477,63636	677	747,68298	777	1,016,21713	977	1,147,65881	977	1,277,86009		
	170	102,01554	370	361,50587	478,63636	678	748,99032	778	1,017,57948	978	1,148,37575	978	1,278,16803		
	170	103,32748	370	362,12176	479,63636	679	749,70577	779	1,018,87472	979	1,149,70577	979	1,280,47597		
	180	235,42970	380	367,53192	480,63636	680	750,60381	780	1,020,19536	980	1,150,98964	980	1,281,78392		
	180	236,73764	380	368,32260	481,63636	681	751,91475	781	890,70903	981	1,152,29758	981	1,283,01866		
	180	105,94336	380	369,53192	482,63636	682	752,42247	782	892,01697	982	1,153,60552	982	1,284,39980		
	180	107,21531	380	370,43533	483,63636	683	753,72269	783	893,32491	983	1,154,91347	983	1,285,70774		
	180	108,55925	380	370,44780	484,63636	684	754,32636	784	894,42713	984	1,156,21241	984	1,287,01569		
	180	109,86719	380	371,45575	485,63636	685	755,63855	785	895,94080	985	1,157,59235	985	1,288,32263		
	180	111,17514	380	372,46941	486,63636	686	756,14546	786	897,24874	986	1,158,29935	986	1,289,63157		
	180	112,483802	380	373,47669	487,63636	687	757,76241	787	898,65890	987	1,160,14524	987	1,290,93952		
	180	113,79102	380	374,17335	488,63636	688	758,26567	788	899,86463	988	1,161,45318	988	1,292,47476		
	180	115,09896	380	375,37958	489,63636	689	759,77035	789	900,17257	989	1,163,76112	989	1,293,55540		
	180	116,40991	380	376,89324	490,63636	690	760,99196	790	901,48051	980	1,164,69970	990	1,294,86334		
	190	248,81709	390	380,61135	491,63636	691	772,99418	801	1,021,50330	991	1,165,37700	991	1,295,37700		
	190	249,81709	390	381,91929	492,63636	692	773,30212	802	1,022,81125	992	1,166,84950	992	1,296,78717		
	190	247,20118	390	383,56402	493,63636	693	775,61006	803	906,04364	993	1,167,99295	993	1,297,49084		
	190	117,71985	390	384,53517	494,63636	694	776,91862	804	1,037,19862	994	1,169,30084	994	1,300,05912		
	190	119,02279	390	385,84312	495,63636	695	777,41637	805	909,02023	995	1,170,48306	995	1,301,49306		
	190	120,32074	390	386,15106	496,63636	696	778,53389	806	910,32817	996	1,171,91672	996	1,302,71100		
	190	121,63668	390	387,15106	497,63636	697	779,84183	807	911,63611	997	1,172,24677	997	1,303,18094		
	190	122,94662	390	388,15106	498,63636	698	780,15756	808	912,94405	998	1,173,53261	998	1,304,73833		
	190	123,45566	390	389,15106	499,63636	699	781,26677	809	913,96685	999	1,174,53261	999	1,305,32269		
	190	125,62651	390	386,33677	500,63636	700	782,37829	810	914,04627	999	1,175,84055	999	1,306,63483		

Circular of the Bureau of Standards

CAPACITY—LIQUID QUARTS TO LITERS

[Reduction factor: 1 liquid quart = 0.9463307 liter]

Liquid quarts	Liters																
0	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	95.580	190.213	284.846	285.793	380.426	397.379	474.113	568.746	569.693	664.326	665.272	758.959	759.055	759.055	759.055	852.646	
2	96.526	191.159	285.793	380.426	397.379	475.059	569.693	664.326	665.272	758.959	759.055	759.055	759.055	759.055	853.592		
3	97.472	192.106	287.658	382.319	476.006	476.552	570.639	570.639	666.218	666.218	759.055	759.055	759.055	759.055	759.055	854.539	
4	98.419	193.052	288.632	383.265	477.898	478.445	571.585	572.532	667.165	667.165	761.798	761.841	761.841	761.841	761.841	855.485	
5	99.365	193.998	289.578	384.211	478.845	479.385	573.478	573.478	668.111	668.111	762.744	762.744	762.744	762.744	762.744	856.431	
6	100.311	194.945	290.524	385.158	479.791	480.337	574.424	574.424	669.057	669.057	763.691	763.691	763.691	763.691	763.691	857.378	
7	101.258	195.891	291.471	386.104	480.737	481.304	575.371	575.371	670.270	670.270	764.637	764.637	764.637	764.637	764.637	858.324	
8	102.204	196.837	292.417	386.104	481.884	481.884	576.317	576.317	670.930	670.930	765.933	765.933	765.933	765.933	765.933	859.270	
9	103.150	197.784	293.363	387.050	482.630	483.276	577.263	577.263	671.896	671.896	766.530	766.530	766.530	766.530	766.530	860.217	
10	94.633	104.097	210	198.730	310	387.997	510	482.630	510	578.210	578.210	672.843	672.843	672.843	672.843	672.843	861.163
11	105.043	199.076	210	294.310	318	388.943	1	483.276	2	578.156	2	673.759	3	768.422	2	862.109	
12	115.356	200.623	295.256	320	389.889	2	484.523	3	580.102	3	674.755	3	769.369	3	863.056		
13	126.302	201.569	296.202	320	390.836	3	485.469	4	581.049	4	675.682	4	770.315	3	864.002		
14	137.248	202.515	297.149	321	391.782	4	486.415	5	581.995	5	676.628	5	771.261	4	864.948		
15	149.150	203.462	298.055	322	392.728	5	487.362	6	582.941	6	677.574	6	772.208	5	865.895		
16	15.1413	109.775	204.354	299.041	323	393.675	6	488.308	7	583.888	7	678.521	7	773.154	7	867.737	
17	16.0877	110.721	205.354	299.988	324	394.621	7	489.354	8	584.834	8	679.467	8	774.100	8	868.734	
18	17.0340	111.667	206.301	300.934	325	395.567	8	490.201	9	585.780	9	680.413	9	775.047	9	869.680	
19	17.9803	112.614	207.247	301.880	326	396.514	9	491.147	9	586.780	9	681.413	9	776.047	9	870.626	
20	18.9267	113.560	220	208.193	320	398.277	420	492.093	620	587.727	720	681.360	820	775.993	920	870.626	
21	18.8730	114.506	220	209.140	321	393.773	420	493.040	621	587.673	721	682.306	821	776.939	1	871.573	
22	21.8193	115.453	221	210.086	322	399.333	2	493.986	2	588.210	2	683.252	2	777.826	2	872.519	
23	21.7657	116.399	221	211.032	323	400.299	3	494.932	3	589.566	3	684.199	3	778.332	3	873.465	
24	22.7120	117.345	221	211.979	324	401.245	4	495.879	4	590.512	4	685.145	4	779.778	4	874.412	
25	23.6583	118.292	222	212.925	325	402.192	5	496.825	5	591.458	5	686.091	5	780.725	5	875.358	
26	24.6047	119.238	223	213.871	326	403.138	6	497.771	6	592.405	6	687.038	6	781.671	6	876.304	
27	25.5510	120.184	224	214.818	327	404.511	7	498.718	7	593.351	7	687.984	7	782.617	7	877.251	
28	26.4973	121.131	225	215.764	328	405.031	8	499.664	8	594.297	8	688.920	8	783.564	8	878.197	
29	27.4437	122.077	226	216.710	329	311.344	9	405.977	9	500.610	9	595.244	9	689.877	9	879.143	
30	28.8900	123.023	230	217.657	330	312.290	430	406.923	630	596.190	730	690.823	830	785.556	930	880.690	
31	29.3363	123.970	231	218.603	331	314.183	1	407.816	1	502.503	2	597.136	2	786.403	1	881.036	
32	30.2827	124.916	232	219.549	332	315.129	2	408.816	2	503.449	2	598.083	2	787.447	2	881.982	
33	31.2290	125.862	233	220.496	333	316.075	3	409.762	3	504.396	3	599.029	3	788.295	3	882.929	
34	32.1753	126.809	234	221.442	334	317.022	4	410.710	4	505.342	4	599.975	4	789.242	4	883.875	
35	33.1217	127.755	235	222.388	335	317.968	5	411.655	5	506.288	5	600.922	5	795.555	5	884.821	
36	34.0680	128.701	236	223.335	336	318.914	6	412.601	6	507.235	6	601.868	6	796.501	6	885.768	
37	35.0143	129.648	237	224.281	337	319.861	7	413.548	7	508.181	7	602.814	7	797.447	7	886.714	
38	36.9607	130.594	238	225.227	338	320.807	8	414.494	8	509.127	8	603.761	8	798.394	8	887.660	
39	36.9070	131.540	239	226.174	339	321.753	9	415.440	9	604.707	9	604.707	9	793.373	9	888.607	
40	37.8533	132.487	240	227.120	340	321.753	440	416.387	640	605.653	740	700.286	840	794.520	940	889.553	
41	38.7997	133.433	241	228.066	341	322.700	1	417.333	1	511.966	1	606.599	1	795.866	1	890.499	
42	39.7460	134.379	242	229.013	342	323.646	2	418.279	2	512.913	2	607.546	2	796.812	2	891.446	
43	40.6923	135.326	243	229.959	343	324.592	3	419.226	3	513.859	3	608.492	3	797.759	3	892.392	
44	41.6387	136.272	244	230.905	344	325.539	4	420.172	4	514.805	4	609.438	4	798.704	4	893.338	
45	42.5850	137.218	245	231.852	345	326.485	5	421.118	5	515.752	5	610.385	5	799.705	5	894.285	
46	43.5313	138.165	246	232.798	346	327.431	6	422.065	6	516.698	6	611.331	6	800.998	6	895.231	
47	44.4777	139.111	247	233.744	347	328.378	7	423.011	7	517.644	7	612.277	7	706.911	7	896.177	
48	45.4240	140.057	248	234.691	348	329.324	8	423.957	8	518.591	8	613.224	8	707.857	8	897.124	
49	46.3703	141.004	249	235.537	349	330.270	9	424.904	9	519.537	9	614.170	9	708.803	9	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	899.016
50	48.2630	150	142.843	250	237.530	350	332.163	450	426.796	550	521.430	650	616.063	750	710.642	850	805.329	950	899.963
50	49.2030	150	143.843	250	238.476	350	333.109	450	427.743	550	522.376	650	617.009	750	711.642	850	806.276	950	900.909
50	50.1587	150	144.789	250	239.422	350	334.056	450	428.689	550	523.322	650	617.955	750	712.589	850	807.222	950	901.855
50	51.1020	150	145.735	250	240.369	350	335.002	450	429.635	550	524.266	650	618.302	750	713.585	850	808.168	950	902.802
50	52.0483	150	146.682	250	241.315	350	335.948	450	430.582	550	525.215	650	619.848	750	714.481	850	809.115	950	903.748
50	52.9947	150	147.628	250	242.261	350	336.895	450	431.228	550	526.161	650	620.794	750	715.428	850	810.061	950	904.694
50	53.9410	150	148.574	250	243.208	350	337.841	450	432.474	550	527.108	650	621.741	750	716.374	850	811.007	950	905.641
50	54.8873	150	149.521	250	244.154	350	338.787	450	433.321	550	528.054	650	622.687	750	717.320	850	811.954	950	906.587
50	55.8337	150	150.467	250	245.100	350	339.734	450	434.367	550	529.000	650	623.633	750	718.267	850	812.900	950	907.533
60	56.7800	160	151.413	260	246.047	360	340.680	460	435.313	560	529.947	660	624.580	760	719.213	860	813.846	960	908.480
60	57.7263	160	152.360	260	246.993	360	341.628	460	436.260	560	530.893	660	625.226	760	720.159	860	814.933	960	909.426
60	58.6727	160	153.306	260	247.939	360	342.573	460	437.206	560	531.899	660	626.472	760	721.106	860	815.379	960	910.372
60	59.6190	160	154.252	260	248.886	360	343.519	460	438.152	560	532.766	660	627.119	760	722.032	860	816.685	960	911.319
60	60.5653	160	155.199	260	249.833	360	344.465	460	439.099	560	533.722	660	628.365	760	722.988	860	817.632	960	912.265
60	61.5116	160	156.145	260	250.778	360	345.412	460	440.045	560	534.678	660	629.311	760	723.945	860	818.578	960	913.211
60	62.4580	160	157.091	260	251.725	360	346.358	460	441.991	560	535.625	660	630.258	760	724.891	860	819.524	960	914.158
60	63.3933	160	158.038	260	252.671	360	347.304	460	442.884	560	536.571	660	631.204	760	725.837	860	820.471	960	915.104
60	64.3506	160	159.930	260	253.617	360	348.251	460	443.830	560	537.517	660	632.150	760	726.784	860	821.417	960	916.050
70	65.2970	170	160.877	270	255.510	370	350.143	470	444.777	570	539.410	670	634.043	770	728.676	870	823.310	970	917.943
70	66.2433	170	161.823	270	256.456	370	351.090	470	445.723	570	540.356	670	634.089	770	729.623	870	824.256	970	918.889
70	67.1896	170	162.769	270	257.403	370	352.036	470	446.669	570	541.303	670	635.336	770	730.569	870	825.202	970	919.836
70	68.1360	170	163.716	270	258.350	370	352.982	470	447.616	570	542.259	670	636.382	770	731.515	870	826.149	970	920.782
70	69.0823	170	164.662	270	259.295	370	353.929	470	448.562	570	543.195	670	637.328	770	732.462	870	827.095	970	921.728
70	70.0286	170	165.608	270	260.242	370	354.875	470	449.508	570	544.142	670	638.775	770	733.408	870	828.041	970	922.675
70	70.9750	170	166.555	270	261.188	370	355.821	470	450.555	570	545.088	670	639.721	770	734.354	870	828.988	970	923.621
70	71.9213	170	167.501	270	262.134	370	356.768	470	451.401	570	546.034	670	640.667	770	735.301	870	830.880	970	924.567
70	72.8676	170	168.447	270	263.081	370	357.714	470	452.447	570	546.981	670	641.114	770	736.247	870	831.807	970	925.514
70	73.8140	170	169.394	270	264.027	370	358.660	470	453.294	570	547.927	670	642.560	770	737.193	870	831.827	970	925.460
80	75.7066	180	170.340	280	264.973	380	359.607	480	454.240	580	548.973	680	643.506	780	738.140	880	832.773	980	927.406
80	76.6530	180	171.286	280	265.920	380	360.553	480	455.186	580	549.820	680	644.153	780	739.086	880	833.719	980	928.353
80	77.5903	180	172.233	280	266.866	380	361.499	480	456.133	580	550.766	680	645.399	780	740.032	880	834.666	980	929.399
80	78.4346	180	173.179	280	267.812	380	362.446	480	457.079	580	551.712	680	646.345	780	741.979	880	835.612	980	930.245
80	79.4920	180	174.125	280	268.759	380	363.392	480	458.025	580	552.659	680	647.292	780	741.925	880	836.558	980	931.192
80	80.4383	180	175.072	280	269.705	380	364.338	480	458.072	580	553.605	680	648.238	780	742.871	880	837.505	980	932.138
80	81.3866	180	176.018	280	270.651	380	365.285	480	459.918	580	554.551	680	649.184	780	743.818	880	838.515	980	933.084
80	82.3310	180	176.964	280	271.598	380	366.231	480	460.864	580	555.498	680	650.131	780	744.764	880	839.597	980	934.031
80	83.2773	180	177.911	280	272.544	380	367.177	480	461.811	580	556.444	680	651.077	780	745.710	880	840.444	980	935.923
80	84.2236	180	178.857	280	273.490	380	368.124	480	462.757	580	557.390	680	652.023	780	746.657	880	841.290	980	935.923
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
90	86.1163	190	180.750	290	275.383	390	370.016	490	464.650	590	559.283	690	653.916	790	748.549	890	843.183	990	937.816
90	87.0626	190	181.696	290	276.339	390	371.963	490	465.595	590	560.229	690	654.862	790	749.496	890	844.129	990	938.709
90	88.0090	190	182.642	290	277.285	390	372.919	490	466.442	590	561.176	690	655.809	790	750.442	890	845.075	990	939.709
90	88.5533	190	183.589	290	278.232	390	373.855	490	467.389	590	562.122	690	656.755	790	751.388	890	846.022	990	940.655
90	89.0016	190	184.535	290	279.188	390	374.802	490	468.335	590	563.068	690	657.701	790	752.335	890	846.968	990	941.601
90	90.8490	190	185.481	290	280.115	390	375.748	490	469.381	590	564.015	690	658.648	790	753.281	890	847.914	990	942.548
90	91.7943	190	186.428	290	281.061	390	376.694	490	470.328	590	565.961	690	659.594	790	754.227	890	848.861	990	943.494
90	92.7406	190	187.374	290	282.007	390	377.641	490	471.274	590	566.907	690	660.540	790	755.174	890	849.807	990	944.440
90	93.6870	190	188.320	290	282.954	390	377.587	490	472.220	590	566.884	690	661.487	790	756.120	890	850.753	990	945.387

CAPACITY—LITERS TO LIQUID QUARTS

[Reduction factor: 1 liter = 1.0567104 quarts]

Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	Liters	Liquid quarts	
0	100	105.671	200	211.342	300	317.013	400	422.684	500	528.355	600	634.026	700	739.697	800	845.368	900	951.039
1	1.0567	1.06278	2	2.1134	3	3.1701	4	4.2286	5	5.2856	6	6.3433	7	7.3960	8	8.4520	9	9.5096
2	2.1134	2.1295	3	3.1701	4	4.2886	5	5.1098	6	6.1665	7	7.2232	8	8.2799	9	9.3376	1	0.53153
3	3.1701	3.2295	4	4.1949	5	5.1095	6	6.1202	7	6.2162	8	6.2323	9	6.2895	1	0.53153	2	0.53153
4	4.2286	4.2886	5	5.1095	6	6.1202	7	6.2162	8	6.2323	9	6.2895	1	0.53153	2	0.53153	3	0.53153
5	5.2856	5.2856	6	6.1202	7	6.13068	8	6.145125	9	6.15181	1	0.53153	2	0.53153	3	0.53153	4	0.53153
6	6.3433	6.3433	7	7.3960	8	8.4520	9	9.5096	1	1.05671	2	2.1134	3	3.1701	4	4.2286	5	5.2856
7	7.3960	7.3960	8	8.4520	9	9.5096	1	1.05671	2	2.1134	3	3.1701	4	4.2286	5	5.2856	6	6.3433
8	8.4520	8.4520	9	9.5096	1	1.05671	2	2.1134	3	3.1701	4	4.2286	5	5.2856	6	6.3433	7	7.3960
9	9.5096	9.5096	1	1.05671	2	2.1134	3	3.1701	4	4.2286	5	5.2856	6	6.3433	7	7.3960	8	8.4520
10	10.5671	11.0	11.6	12.295	12.80	13.310	14.0	14.325	15.10	15.387	16.10	16.444	17.10	17.50	18.10	18.55	19.10	19.606
11	11.6238	12.0	12.6805	13.732	14.7939	15.8057	16.9074	17.9641	18.0288	19.0725	19.2075	19.25749	20.120	21.132	22.165	23.192	24.199	25.230
12	12.6805	13.1852	14.1949	15.12045	16.12122	17.122578	18.123578	19.123578	20.123578	21.123578	22.123578	23.123578	24.123578	25.123578	26.123578	27.123578	28.123578	29.123578
13	13.732	14.1949	15.12045	16.12122	17.122578	18.123578	19.123578	20.123578	21.123578	22.123578	23.123578	24.123578	25.123578	26.123578	27.123578	28.123578	29.123578	30.123578
14	14.7939	15.12045	16.12122	17.122578	18.123578	19.123578	20.123578	21.123578	22.123578	23.123578	24.123578	25.123578	26.123578	27.123578	28.123578	29.123578	30.123578	31.123578
15	15.8057	16.1202	17.122578	18.123578	19.123578	20.123578	21.123578	22.123578	23.123578	24.123578	25.123578	26.123578	27.123578	28.123578	29.123578	30.123578	31.123578	32.123578
16	16.9074	17.9641	18.0288	19.0725	20.0725	21.123578	22.123578	23.123578	24.123578	25.123578	26.123578	27.123578	28.123578	29.123578	30.123578	31.123578	32.123578	33.123578
17	17.9641	18.0288	19.0725	20.0725	21.123578	22.123578	23.123578	24.123578	25.123578	26.123578	27.123578	28.123578	29.123578	30.123578	31.123578	32.123578	33.123578	34.123578
18	18.0288	19.0725	20.0725	21.123578	22.123578	23.123578	24.123578	25.123578	26.123578	27.123578	28.123578	29.123578	30.123578	31.123578	32.123578	33.123578	34.123578	35.123578
19	19.0725	19.2075	20.0725	21.123578	22.123578	23.123578	24.123578	25.123578	26.123578	27.123578	28.123578	29.123578	30.123578	31.123578	32.123578	33.123578	34.123578	35.123578
20	21.132	22.0	22.476	23.20	23.476	23.20	23.8147	24.20	24.448	24.80	25.00	25.20	25.50	25.80	26.10	26.50	27.20	
21	22.1969	22.862	23.127	23.476	23.8147	23.20	23.533	23.90	24.448	24.80	25.00	25.20	25.50	25.80	26.10	26.50	27.20	27.90
22	23.2476	23.476	23.8147	24.03	24.448	23.90	24.20	24.50	24.80	25.00	25.20	25.50	25.80	26.10	26.50	27.20	27.90	28.60
23	24.3043	24.03	24.448	24.100	24.50	23.90	24.100	24.30	24.50	24.80	25.00	25.20	25.50	25.80	26.10	26.50	27.20	27.90
24	25.3610	25.100	25.40	25.100	25.50	24.30	25.100	25.30	25.50	25.80	26.00	26.20	26.50	26.80	27.10	27.40	28.10	28.80
25	26.4178	26.100	26.40	26.100	26.50	25.30	26.100	26.30	26.50	26.80	27.00	27.20	27.50	27.80	28.10	28.40	29.10	29.80
26	27.4745	26.100	26.33	26.100	26.50	25.30	26.100	26.30	26.50	26.80	27.00	27.20	27.50	27.80	28.10	28.40	29.10	29.80
27	28.5312	27.100	27.33	27.100	27.50	26.30	27.100	27.30	27.50	27.80	28.00	28.20	28.50	28.80	29.10	29.40	30.10	30.80
28	29.5879	28.100	28.33	28.100	28.50	27.30	28.100	28.30	28.50	28.80	29.00	29.20	29.50	29.80	30.10	30.40	31.10	31.80
29	30.6446	29.100	29.33	29.100	29.50	28.30	29.100	29.30	29.50	29.80	30.00	30.20	30.50	30.80	31.10	31.40	32.10	32.80
30	31.7013	30.100	30.33	30.100	30.50	29.30	30.100	30.30	30.50	30.80	31.00	31.20	31.50	31.80	32.10	32.40	33.10	33.80
31	32.7580	31.100	31.33	31.100	31.50	30.30	31.100	31.30	31.50	31.80	32.00	32.20	32.50	32.80	33.10	33.40	34.10	34.80
32	33.8147	32.100	32.33	32.100	32.50	31.30	32.100	32.30	32.50	32.80	33.00	33.20	33.50	33.80	34.10	34.40	35.10	35.80
33	34.8714	33.100	33.33	33.100	33.50	32.30	33.100	33.30	33.50	33.80	34.00	34.20	34.50	34.80	35.10	35.40	36.10	36.80
34	35.9252	34.100	34.33	34.100	34.50	33.30	34.100	34.30	34.50	34.80	35.00	35.20	35.50	35.80	36.10	36.40	37.10	37.80
35	36.9849	35.100	35.33	35.100	35.50	34.30	35.100	35.30	35.50	35.80	36.00	36.20	36.50	36.80	37.10	37.40	38.10	38.80
36	38.0416	36.100	36.33	36.100	36.50	35.30	36.100	36.30	36.50	36.80	37.00	37.20	37.50	37.80	38.10	38.40	39.10	39.80
37	39.0983	37.100	37.33	37.100	37.50	36.30	37.100	37.30	37.50	37.80	38.00	38.20	38.50	38.80	39.10	39.40	40.10	40.80
38	40.1550	39.100	40.33	39.100	40.50	38.30	39.100	39.30	39.50	39.80	40.00	40.20	40.50	40.80	41.10	41.40	42.10	42.80
39	41.2117	40.100	41.33	40.100	41.50	39.30	40.100	40.30	40.50	40.80	41.00	41.20	41.50	41.80	42.10	42.40	43.10	43.80
40	42.2684	41.0	42.33	41.0	42.50	40.30	41.0	41.30	41.50	41.80	42.00	42.20	42.50	42.80	43.0	43.40	44.0	44.60
41	43.3251	42.0	43.33	42.0	43.50	40.30	42.0	42.30	42.50	42.80	43.00	43.20	43.50	43.80	44.0	44.40	45.0	45.60
42	44.3818	43.0	44.33	43.0	44.50	41.30	43.0	43.30	43.50	43.80	44.00	44.20	44.50	44.80	45.0	45.40	46.0	46.60
43	45.4385	44.0	45.33	44.0	45.50	42.30	44.0	44.30	44.50	44.80	45.00	45.20	45.50	45.80	46.0	46.40	47.0	47.60
44	46.4953	45.0	46.33	45.0	46.50	43.30	45.0	45.30	45.50	45.80	46.00	46.20	46.50	46.80	47.0	47.40	48.0	48.60
45	47.5520	46.0	47.33	46.0	47.50	44.30	46.0	46.30	46.50	46.80	47.00	47.20	47.50	47.80	48.0	48.40	49.0	49.60
46	48.6087	47.0	48.33	47.0	48.50	45.30	47.0	47.30	47.50	47.80	48.00	48.20	48.50	48.80	49.0	49.40	49.80	50.20
47	49.6654	48.0	49.33	48.0	49.50	46.30	48.0	48.30	48.50	48.80	49.00	49.20	49.50	49.80	50.0	50.40	50.80	51.20
48	50.7221	49.0	50.33	49.0	50.50	47.30	49.0	49.30	49.50	49.80	50.00	50.20	50.50	50.80	51.0	51.40	51.80	52.20
49	51.7781	50.0	51.33	50.0	51.50	48.30	50.0	50.30	50.50	50.80	51.00	51.20	51.50	51.80	52.0	52.40	52.80	53.20

Units of Weight and Measure—Definitions and Tables of Equivalents

47

50	52.8355	150	158.507	250	264.178	350	369.849	450	475.520	550	581.191	650	686.862	750	792.533	850	898.204	950	1,003.875	
50	1	53.822	1	159.563	1	265.234	1	370.905	1	476.576	1	582.247	1	687.918	1	783.590	1	899.261	1	1,004.932
50	2	54.9489	2	160.620	2	266.291	2	371.362	2	477.633	2	583.304	2	688.975	2	784.646	2	890.317	2	1,005.988
50	3	56.0057	3	161.677	3	267.348	3	373.019	3	478.690	3	584.361	3	690.032	3	795.703	3	901.374	3	1,007.045
50	4	57.0224	4	162.733	4	268.404	4	374.075	4	479.747	4	585.418	4	691.089	4	796.760	4	902.431	4	1,008.102
50	5	58.1191	5	163.790	5	269.461	5	375.132	5	480.803	5	586.474	5	692.145	5	797.816	5	893.487	5	1,009.158
50	6	59.1758	6	164.847	6	270.518	6	376.189	6	481.860	6	587.531	6	693.202	6	798.873	6	904.544	6	1,010.215
50	7	60.2225	7	165.904	7	271.575	7	377.246	7	482.917	7	588.588	7	694.259	7	799.930	7	905.601	7	1,011.272
50	8	61.2892	8	166.960	8	272.631	8	378.302	8	483.973	8	589.644	8	695.315	8	800.986	8	906.638	8	1,012.329
50	9	62.3459	9	168.017	9	273.688	9	379.359	9	485.030	9	590.701	9	696.372	9	802.043	9	907.714	9	1,013.385
50	10	63.4026	10	169.074	10	274.745	10	380.416	10	486.087	10	590.758	10	697.429	10	803.100	10	906.960	10	1,014.442
50	11	64.4593	11	170.130	11	275.801	11	381.472	11	487.143	11	592.815	11	698.486	11	804.157	11	909.828	11	1,015.499
50	12	65.5160	12	171.187	12	276.858	12	382.529	12	488.200	12	593.871	12	699.542	12	805.213	12	910.884	12	1,016.555
50	13	66.5728	13	172.244	13	277.915	13	383.586	13	489.257	13	594.928	13	700.599	13	806.270	13	911.941	13	1,017.612
50	14	67.6395	14	173.301	14	278.972	14	384.643	14	490.314	14	595.985	14	701.656	14	807.327	14	912.998	14	1,018.669
50	15	68.662	15	174.357	15	280.028	15	385.699	15	491.370	15	597.041	15	702.712	15	808.383	15	914.054	15	1,019.726
50	16	69.7229	16	175.414	16	281.085	16	386.756	16	492.427	16	598.098	16	703.769	16	809.440	16	915.111	16	1,020.782
50	17	70.7896	17	176.471	17	282.142	17	387.813	17	493.484	17	599.155	17	704.826	17	810.497	17	916.168	17	1,021.839
50	18	71.8563	18	177.527	18	283.198	18	388.869	18	494.540	18	600.212	18	705.883	18	811.554	18	917.225	18	1,022.896
50	19	72.9130	19	178.584	19	284.255	19	389.326	19	495.597	19	601.268	19	706.939	19	812.610	19	918.281	19	1,023.952
50	20	73.9697	20	179.641	20	285.312	20	390.983	20	496.654	20	602.325	20	707.996	20	813.667	20	919.338	20	1,025.009
50	21	75.0264	21	180.697	21	286.369	21	392.040	21	497.711	21	603.382	21	709.053	21	814.724	21	920.305	21	1,026.066
50	22	76.0831	22	181.754	22	287.425	22	393.096	22	498.767	22	604.438	22	710.109	22	815.780	22	921.451	22	1,027.123
50	23	77.1399	23	182.811	23	288.482	23	394.153	23	499.824	23	605.552	23	711.166	23	816.857	23	922.508	23	1,028.179
50	24	78.1966	24	183.868	24	289.539	24	395.210	24	500.881	24	606.552	24	712.223	24	817.894	24	923.565	24	1,029.236
50	25	79.2533	25	184.924	25	290.595	25	396.266	25	501.937	25	607.608	25	713.280	25	818.951	25	924.622	25	1,030.293
50	26	80.3100	26	185.981	26	291.652	26	397.323	26	502.994	26	608.665	26	714.336	26	820.007	26	925.678	26	1,031.349
50	27	81.3667	27	187.038	27	292.709	27	398.380	27	504.051	27	609.722	27	715.393	27	821.064	27	926.735	27	1,032.406
50	28	82.4234	28	188.094	28	293.765	28	399.437	28	505.108	28	610.779	28	716.459	28	822.121	28	927.792	28	1,033.463
50	29	83.4801	29	189.151	29	294.822	29	400.493	29	506.164	29	611.835	29	717.506	29	823.177	29	928.848	29	1,034.519
50	30	84.5368	30	190.208	30	295.879	30	401.550	30	507.221	30	612.892	30	718.563	30	824.234	30	930.905	30	1,035.576
50	31	85.5935	31	191.265	31	296.936	31	402.607	31	508.271	31	613.949	31	719.620	31	825.291	31	930.962	31	1,036.633
50	32	86.6503	32	192.321	32	297.992	32	403.663	32	509.334	32	615.005	32	720.676	32	826.348	32	932.019	32	1,037.690
50	33	87.7070	33	193.378	33	298.049	33	404.720	33	510.391	33	616.062	33	721.733	33	827.404	33	933.075	33	1,038.746
50	34	88.7637	34	194.435	34	299.106	34	405.777	34	511.448	34	617.119	34	722.790	34	828.461	34	934.132	34	1,039.803
50	35	89.8204	35	195.491	35	300.162	35	406.834	35	512.505	35	618.176	35	723.847	35	829.518	35	935.189	35	1,040.860
50	36	90.8771	36	196.548	36	302.219	36	407.890	36	513.561	36	619.232	36	724.903	36	830.574	36	936.245	36	1,041.916
50	37	91.9338	37	197.605	37	303.276	37	408.947	37	514.618	37	620.289	37	725.960	37	831.631	37	937.302	37	1,042.973
50	38	92.9905	38	198.662	38	304.333	38	410.004	38	515.675	38	621.346	38	727.017	38	832.688	38	938.339	38	1,044.030
50	39	94.0472	39	199.718	39	305.389	39	411.060	39	516.731	39	622.402	39	728.073	39	833.745	39	939.416	39	1,045.087
50	40	95.1039	40	200.775	40	306.446	40	390.412	40	517.788	40	590.639	40	623.459	40	729.130	40	834.801	40	940.472
50	41	96.1606	41	201.832	41	307.503	41	413.174	41	518.845	41	624.116	41	730.187	41	835.558	41	941.539	41	1,047.200
50	42	97.2174	42	202.388	42	308.559	42	414.230	42	520.958	42	625.573	42	731.244	42	836.915	42	942.586	42	1,048.257
50	43	98.2741	43	203.945	43	309.616	43	415.287	43	522.015	43	627.688	43	626.629	43	837.971	43	943.632	43	1,049.313
50	44	99.3308	44	205.002	44	310.673	44	416.344	44	523.072	44	628.688	44	733.357	44	839.028	44	944.699	44	1,050.370
50	45	100.3875	45	206.059	45	311.730	45	417.401	45	524.147	45	629.743	45	734.414	45	840.085	45	945.756	45	1,051.427
50	46	101.4442	46	207.115	46	312.786	46	418.457	46	525.128	46	630.790	46	735.470	46	841.141	46	946.813	46	1,052.484
50	47	102.5009	47	208.172	47	313.843	47	419.514	47	525.185	47	630.556	47	736.527	47	842.198	47	947.869	47	1,053.547
50	48	103.5576	48	209.229	48	314.900	48	420.571	48	526.242	48	631.913	48	737.584	48	843.255	48	948.926	48	1,054.597
50	49	104.6143	49	210.285	49	315.956	49	421.627	49	527.298	49	632.970	49	738.641	49	844.312	49	949.983	49	1,055.634

CAPACITY—GALLONS TO LITERS

[Reduction factor: 1 gallon = 3.785333 liters]

Gal-lons	Liters	Gal-lons	Liters	Gal-lons	Liters	Gal-lons	Liters	Gal-lons	Liters	Gal-lons	Liters	Gal-lons	Liters	Gal-lons	Liters
0	378.533	200	757.066	400	1,514.133	500	1,892.666	600	2,271.199	700	2,649.733	800	3,028.266	900	3,406.799
1	382.319	1	760.852	2	1,435.104	3	1,385.385	4	1,521.704	5	1,519.918	6	1,896.451	7	2,041.584
2	386.104	2	764.637	3	1,435.237	4	1,435.170	5	1,525.469	6	1,904.022	7	2,051.650	8	2,144.370
3	393.889	3	768.422	4	1,435.208	5	1,435.176	6	1,525.469	7	1,904.022	8	2,051.650	9	2,148.155
4	15.1413	4	393.675	5	397.460	6	775.993	7	779.778	8	783.564	9	787.349	10	791.134
5	18.9676	6	22.720	7	405.031	8	408.816	9	412.601	10	416.387	11	420.172	12	424.338
6	22.720	8	405.031	9	408.816	10	412.601	11	416.387	12	420.172	13	423.957	14	427.743
7	26.4913	9	412.601	10	416.387	11	420.172	12	424.338	13	423.957	14	427.743	15	431.528
8	30.2827	11	416.387	12	420.172	13	423.957	14	427.743	15	431.528	16	435.313	17	439.099
9	34.0680	13	420.172	14	424.338	15	423.957	16	427.743	17	431.528	18	435.313	19	439.099
10	37.8333	15	424.338	16	428.117	17	428.705	18	432.490	19	436.272	20	440.056	21	443.833
11	41.6387	17	428.117	18	432.490	19	436.272	20	440.056	21	443.833	22	447.610	23	451.387
12	45.4240	19	432.490	20	436.272	21	440.056	22	443.833	23	447.610	24	451.387	25	455.164
13	49.2093	20	436.272	21	440.056	22	443.833	23	447.610	24	451.387	25	455.164	26	458.941
14	52.9947	21	440.056	22	443.833	23	447.610	24	451.387	25	455.164	26	458.941	27	462.718
15	56.7800	23	443.833	24	447.610	25	451.387	26	455.164	27	458.941	28	462.718	29	466.495
16	60.5653	25	447.610	26	451.387	27	455.164	28	458.941	29	462.718	30	466.495	31	470.272
17	64.3505	27	441.446	28	445.222	29	448.999	30	452.775	31	456.552	32	460.329	33	464.096
18	68.1360	28	445.222	29	448.999	30	452.775	31	456.552	32	460.329	33	464.096	34	467.873
19	71.9213	29	450.455	30	454.232	31	458.009	32	461.785	33	465.546	34	470.272	35	474.853
20	75.7066	30	454.240	32	458.009	33	461.785	34	465.546	35	470.272	36	474.853	37	479.430
21	79.4920	31	458.025	33	461.811	34	465.596	35	470.272	36	474.853	37	479.430	38	483.007
22	83.2773	32	461.811	34	465.596	35	470.272	36	474.853	37	479.430	38	483.007	39	486.584
23	87.0626	33	465.596	35	470.272	36	474.853	37	479.430	38	483.007	39	486.584	40	490.187
24	90.8800	34	469.381	36	474.114	37	478.895	38	482.561	39	486.338	40	490.187	41	493.961
25	94.6333	35	473.167	36	478.766	37	482.533	38	486.305	39	490.174	40	493.951	41	497.629
26	98.4186	36	476.952	37	485.485	38	489.262	39	493.049	40	496.819	41	499.587	42	502.327
27	102.2040	37	480.737	38	489.237	39	493.016	40	496.819	41	499.587	42	502.327	43	505.066
28	105.9893	38	484.523	39	486.306	40	492.270	41	495.042	42	497.810	43	501.747	44	505.427
29	109.7746	39	488.308	40	486.841	41	495.374	42	497.810	43	501.747	44	505.427	45	509.090
30	113.5600	40	492.093	42	497.626	43	501.426	44	506.226	45	510.026	46	513.826	47	517.626
31	117.3535	41	495.093	43	501.426	44	506.226	45	510.026	46	513.826	47	517.626	48	521.426
32	121.1306	42	499.664	43	506.272	44	513.355	45	519.008	46	523.730	47	528.435	48	533.115
33	124.9160	43	503.449	44	512.506	45	519.008	46	523.730	47	528.435	48	533.115	49	537.815
34	128.7013	44	507.235	45	516.301	46	524.301	47	529.016	48	534.705	49	539.395	50	543.085
35	132.4866	45	511.020	46	518.866	47	526.866	48	532.466	49	538.066	50	543.756	51	548.436
36	136.2720	46	514.805	47	521.872	48	526.045	49	532.466	50	538.066	51	543.756	52	548.436
37	140.0573	47	518.591	48	527.124	49	526.591	50	532.723	51	538.723	52	544.527	53	550.820
38	143.8226	48	522.376	49	500.909	50	527.942	51	532.376	52	538.309	53	544.042	54	550.308
39	147.6380	49	526.161	50	904.694	51	1,283.228	52	9,165.761	53	9,204.264	54	9,418.827	55	9,717.361
40	151.4133	50	529.947	52	908.480	53	1,287.013	54	1,665.546	55	1,410.044	56	1,440.079	57	1,470.146
41	155.1866	51	533.732	52	912.265	53	1,291.784	54	1,669.332	55	1,414.865	56	1,444.865	57	1,474.865
42	158.9400	52	537.517	53	916.050	54	1,294.584	55	1,673.117	56	1,418.650	57	1,448.650	58	1,478.650
43	162.7933	53	541.303	54	919.836	55	1,298.369	56	1,676.902	57	1,422.055	58	1,453.333	59	1,481.035
44	166.5546	54	545.088	55	923.621	56	1,302.154	57	1,680.688	58	1,425.059	59	1,457.754	60	1,484.820
45	170.3400	55	548.873	56	927.406	57	1,305.940	58	1,684.473	59	1,428.683	60	1,461.539	61	1,497.189
46	174.1553	56	552.659	57	934.977	58	1,313.510	59	1,692.044	60	1,432.666	61	1,473.856	62	1,509.927
47	177.9106	57	556.444	58	938.762	59	1,317.296	60	1,695.829	61	1,436.372	62	1,474.362	63	1,516.176
48	181.6650	58	560.229	59	938.762	60	1,317.296	61	1,695.829	62	1,436.372	63	1,474.362	64	1,516.176
49	185.4813	59	564.015	60	940.591	61	1,321.081	62	1,699.614	63	1,436.372	64	1,474.362	65	1,516.176

50	189.2666	250	567.800	946.333	350	1,324.866	450	1,703.400	550	2,081.933	650	2,460.466	750	2,838.999	850	3,217.532
1	193.0519	1	571.585	950.118	1	1,328.652	1	1,707.185	1	2,085.178	1	2,464.251	1	2,842.785	1	3,221.318
2	196.8373	2	575.371	953.904	2	1,332.337	2	1,701.970	2	2,089.503	2	2,468.037	2	2,846.370	2	3,225.103
3	200.6226	3	579.156	957.689	3	1,336.222	3	1,714.756	3	2,093.289	3	2,471.822	3	2,850.355	3	3,228.888
4	204.4079	4	582.941	961.474	4	1,340.008	4	1,718.541	4	2,097.074	4	2,475.607	4	2,854.141	4	3,232.674
5	208.1933	5	586.727	965.260	5	1,343.793	5	1,720.850	5	2,100.850	5	2,479.339	5	2,857.926	5	3,236.459
6	211.9786	6	590.512	969.045	6	1,347.578	6	1,726.112	6	2,104.645	6	2,483.178	6	2,861.711	6	3,240.244
7	215.7639	7	594.283	972.830	7	1,351.364	7	1,729.897	7	2,108.430	7	2,486.963	7	2,865.497	7	3,244.030
8	219.5493	8	598.083	980.401	8	1,355.149	8	1,733.682	8	2,112.215	8	2,490.749	8	2,869.282	8	3,247.815
9	223.3346	9	601.868	980.401	9	1,358.934	9	1,737.468	9	2,116.001	9	2,494.534	9	2,873.067	9	3,251.600
60	227.1199	160	605.653	980.186	260	1,362.720	460	1,745.038	560	2,119.786	660	2,498.319	760	2,876.853	860	3,255.386
1	230.9055	1	609.438	987.927	1	1,366.525	1	1,745.571	1	2,123.571	1	2,502.105	1	2,880.638	1	3,259.774
2	234.5906	2	613.224	991.757	2	1,370.299	2	1,748.824	2	2,127.357	2	2,505.890	2	2,884.423	2	3,262.956
3	238.4759	3	617.009	995.532	3	1,374.976	3	1,752.669	3	2,131.142	3	2,509.675	3	2,888.209	3	3,265.275
4	242.2613	4	620.794	999.328	4	1,377.364	4	1,760.127	4	2,134.027	4	2,513.461	4	2,891.294	4	3,270.527
5	246.0466	5	624.580	1,003.113	5	1,381.646	5	1,760.180	5	2,138.713	5	2,517.246	5	2,895.779	5	3,274.312
6	249.8319	6	628.365	1,006.898	6	1,385.332	6	1,763.965	6	2,142.498	6	2,521.031	6	2,899.565	6	3,278.098
7	253.6173	7	632.150	1,010.684	7	1,389.217	7	1,767.750	7	2,146.283	7	2,524.817	7	2,903.350	7	3,281.883
8	257.4026	8	635.936	1,014.469	8	1,393.002	8	1,771.536	8	2,150.060	8	2,528.662	8	2,907.135	8	3,285.668
9	261.1879	9	639.721	1,018.234	9	1,396.788	9	1,775.321	9	2,153.854	9	2,532.387	9	2,910.921	9	3,289.454
70	264.9733	170	643.506	1,022.040	270	1,025.825	470	1,400.573	570	1,779.106	670	2,157.339	770	2,536.173	870	2,933.239
1	268.7586	1	647.292	1,029.610	1	1,039.610	1	1,404.144	1	1,782.892	1	2,161.125	1	2,539.938	1	2,941.791
2	272.5439	2	651.077	1,037.429	2	1,039.396	2	1,408.144	2	1,786.677	2	2,165.210	2	2,543.743	2	2,942.277
3	276.3293	3	654.862	1,033.396	3	1,411.929	3	1,790.462	3	2,168.990	3	2,547.529	3	2,946.062	3	2,950.380
4	280.1146	4	658.648	1,037.181	4	1,415.714	4	1,794.248	4	2,172.781	4	2,551.314	4	2,929.847	4	3,288.350
5	283.8999	5	662.433	1,040.966	5	1,419.500	5	1,798.033	5	2,176.566	5	2,555.099	5	2,933.638	5	3,312.166
6	287.6853	6	666.218	1,044.752	6	1,423.385	6	1,801.818	6	2,180.351	6	2,558.855	6	2,937.118	6	3,316.951
7	291.4706	7	670.004	1,048.537	7	1,427.207	7	1,805.604	7	2,184.137	7	2,562.670	7	2,941.203	7	3,319.736
8	295.2559	8	673.789	1,052.322	8	1,430.856	8	1,809.339	8	2,187.927	8	2,566.455	8	2,944.989	8	3,323.522
9	299.0413	9	677.574	1,056.108	9	1,434.641	9	1,813.174	9	2,191.707	9	2,570.241	9	2,948.774	9	3,327.307
80	302.8266	180	681.360	1,059.893	380	1,438.426	480	1,816.960	580	2,195.493	680	2,574.026	780	2,952.559	880	3,331.092
1	306.6119	1	685.145	1,063.678	1	1,442.212	1	1,820.755	1	2,199.278	1	2,577.811	1	2,955.345	1	3,334.878
2	310.3972	2	688.320	1,067.464	2	1,445.997	2	1,824.520	2	2,203.063	2	2,581.537	2	2,960.130	2	3,335.863
3	314.1872	3	692.716	1,077.249	3	1,449.782	3	1,828.316	3	2,206.849	3	2,585.332	3	2,963.915	3	3,342.448
4	317.9679	4	696.501	1,075.034	4	1,453.668	4	1,832.101	4	2,210.634	4	2,589.167	4	2,967.101	4	3,346.234
5	321.7532	5	700.286	1,078.820	5	1,457.353	5	1,837.419	5	2,214.419	5	2,592.953	5	2,971.486	5	3,350.019
6	325.5386	6	704.072	1,082.605	6	1,462.138	6	1,842.397	6	2,218.205	6	2,596.738	6	2,975.271	6	3,353.804
7	329.3239	7	707.857	1,086.390	7	1,464.924	7	1,847.242	7	2,221.990	7	2,600.523	7	2,979.057	7	3,357.590
8	333.0929	8	711.652	1,090.176	8	1,468.709	8	1,847.242	8	2,225.775	8	2,604.369	8	2,982.842	8	3,361.375
9	336.8946	9	715.428	1,093.961	9	1,472.494	9	1,851.027	9	2,229.561	9	2,608.094	9	2,986.627	9	3,365.160
90	340.6799	190	719.213	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	344.4652	1	722.998	1,101.532	1	1,480.065	1	1,858.598	1	2,237.131	1	2,615.665	1	2,994.198	1	3,372.731
2	348.2506	2	726.784	1,105.317	2	1,483.850	2	1,862.333	2	2,240.917	2	2,619.450	2	2,997.983	2	3,376.516
3	352.0359	3	730.569	1,109.102	3	1,487.636	3	1,866.169	3	2,244.702	3	2,623.235	3	3,001.769	3	3,380.302
4	355.8212	4	734.354	1,112.888	4	1,491.421	4	1,869.954	4	2,248.487	4	2,627.021	4	3,005.554	4	3,384.087
5	359.6066	5	738.140	1,116.673	5	1,495.306	5	1,873.739	5	2,252.273	5	2,630.806	5	3,009.339	5	3,387.872
6	363.3919	6	741.925	1,120.458	6	1,498.992	6	1,877.525	6	2,256.058	6	2,634.591	6	3,013.125	6	3,391.443
7	367.1772	7	745.710	1,124.244	7	1,502.777	7	1,881.310	7	2,259.843	7	2,638.377	7	3,016.910	7	3,377.916
8	370.9626	8	749.496	1,128.029	8	1,506.662	8	1,885.095	8	2,263.629	8	2,642.162	8	3,020.695	8	3,399.228
9	374.7479	9	753.281	1,131.814	9	1,510.348	9	1,888.881	9	2,267.414	9	2,645.947	9	3,024.481	9	3,403.014

Circular of the Bureau of Standards

CAPACITY—LITERS TO GALLONS

[Reduction factor: 1 liter = 0.26417760 gallons]

Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	
0	0	0.26418	200	52.8355	300	79.2533	400	105.6710	500	132.0888	600	158.5066	700	184.9243	800	211.3421
1	1	26.6819	200	53.0997	300	79.5175	400	105.3352	500	132.3530	600	158.7077	700	185.1885	800	211.6063
2	2	52.961	200	53.3639	300	79.7816	400	106.1994	500	132.6172	600	159.0349	700	185.4527	800	211.8704
3	3	27.2103	200	53.6281	300	80.0458	400	106.4636	500	132.8813	600	159.7169	700	185.7169	800	212.1346
4	4	27.4745	200	53.8922	300	80.3109	400	106.5278	500	133.1455	600	159.5633	700	185.9810	800	212.3988
5	5	27.7386	200	54.1564	300	80.5743	400	106.9119	500	133.4097	600	159.8274	700	186.2452	800	212.6630
6	6	28.0028	200	54.4206	300	80.8383	400	107.2561	500	133.6739	600	160.0916	700	186.5094	800	212.9217
7	7	28.2570	200	54.6848	300	81.1025	400	107.5203	500	133.9380	600	160.3358	700	186.7736	800	213.1913
8	8	28.5132	200	54.9479	300	81.3667	400	107.7845	500	134.2022	600	160.6200	700	187.0377	800	213.8733
9	9	28.7554	200	55.2131	300	81.6309	400	108.0486	500	134.4664	600	160.8842	700	187.3019	800	213.7197
10	10	26.4178	210	55.4773	310	81.8951	410	108.3128	510	134.7306	610	161.1483	710	187.5661	810	213.9839
11	11	29.0595	210	55.7415	310	82.1592	410	108.3770	510	135.0098	610	161.4125	710	187.8303	810	214.4840
12	12	29.3379	210	56.0057	310	82.4234	410	108.8412	510	135.2589	610	161.6767	710	188.0945	810	214.5122
13	13	29.5103	210	56.2698	310	82.6876	410	109.1053	510	135.5231	610	161.9409	710	188.3386	810	214.7764
14	14	30.1162	210	56.5340	310	82.9518	410	109.3695	510	135.7873	610	162.2050	710	188.6228	810	215.0406
15	15	30.3804	210	56.7982	310	83.2159	410	109.5337	510	136.0515	610	162.4492	710	188.8870	810	215.3047
16	16	30.646	210	56.9626	310	83.4801	410	109.8779	510	136.3156	610	162.7334	710	189.1512	810	215.5689
17	17	30.9088	210	57.3265	310	83.7443	410	110.1621	510	136.5798	610	162.9976	710	189.4153	810	215.8309
18	18	31.1730	210	57.5907	310	84.0085	410	110.4602	510	136.8440	610	163.2618	710	189.6795	810	216.0973
19	19	31.4371	210	57.8549	310	84.2727	410	110.5904	510	137.1082	610	163.5259	710	189.9437	810	216.3615
20	20	31.7013	220	58.1191	320	84.5368	420	110.5046	520	137.3724	620	163.7901	720	190.2079	820	216.6256
21	21	31.9555	220	58.3832	320	84.8010	420	111.2188	520	137.6365	620	164.0553	720	190.4720	820	216.8993
22	22	32.2297	220	58.6365	320	85.0652	420	111.4829	520	138.0007	620	164.3185	720	191.7362	820	217.1540
23	23	32.4938	220	58.9116	320	85.3294	420	111.7471	520	138.1649	620	164.5826	720	191.0004	820	217.4812
24	24	32.7580	220	59.1758	320	85.5935	420	112.0113	520	138.4291	620	164.8468	720	191.2646	820	217.6823
25	25	33.0222	220	59.4400	320	85.8577	420	112.2755	520	138.6932	620	165.1110	720	191.5288	820	217.9465
26	26	33.2864	220	59.7041	320	86.1219	420	112.5397	520	138.9574	620	165.3752	720	191.7929	820	218.2107
27	27	33.5506	220	59.9683	320	86.3861	420	112.8038	520	139.2216	620	165.6394	720	192.0571	820	218.4749
28	28	33.8147	220	60.2325	320	86.6503	420	113.0680	520	139.4858	620	165.9035	720	192.3213	820	218.8266
29	29	34.0789	220	60.4967	320	86.9144	420	113.3322	520	139.7500	620	166.1677	720	192.5855	820	219.0032
30	30	34.3431	230	60.7608	330	87.1786	430	113.5964	530	140.1410	630	166.4319	730	193.1138	830	219.2674
31	31	34.6073	230	61.0250	330	87.4428	430	113.8605	530	140.2783	630	166.6961	730	193.3890	830	219.5316
32	32	34.8714	230	61.2892	330	87.7070	430	114.1247	530	140.3425	630	166.9602	730	193.6622	830	219.7958
33	33	35.1556	230	61.5534	330	87.9713	430	114.3889	530	140.5067	630	167.2244	730	193.9624	830	219.9599
34	34	35.3998	230	61.8176	330	88.2353	430	114.6331	530	141.0708	630	167.4886	730	194.0664	830	220.3341
35	35	35.6640	230	62.0817	330	88.4995	430	114.8917	530	141.3350	630	167.7528	730	194.1705	830	220.5883
36	36	35.9352	230	62.3459	330	88.7637	430	115.1814	530	141.5992	630	168.0170	730	194.4347	830	220.8526
37	37	36.1223	230	62.6101	330	89.0279	430	115.4456	530	141.8634	630	168.2811	730	194.6989	830	221.1167
38	38	36.4665	230	62.8747	330	89.2920	430	115.7098	530	142.1275	630	168.5453	730	195.0380	830	221.3808
39	39	36.7207	230	63.1384	330	89.5562	430	115.9740	530	142.3917	630	168.8095	730	195.2272	830	221.6509
40	40	36.56710	240	63.4026	340	89.8204	440	116.2381	540	142.6559	640	169.0737	740	195.4914	840	221.9092
41	41	36.8949	240	63.6668	340	90.0846	440	116.5023	540	142.9201	640	169.3378	740	195.7556	840	224.5911
42	42	37.2490	240	63.9310	340	90.3487	440	116.7665	540	143.1843	640	169.6020	740	196.0198	840	224.8535
43	43	37.5132	240	64.1952	340	90.6129	440	117.0307	540	143.4884	640	169.8662	740	196.2840	840	225.7017
44	44	37.7774	240	64.4593	340	90.8711	440	117.2849	540	143.7126	640	170.1304	740	196.5481	840	226.9059
45	45	38.0416	240	64.7235	340	91.1313	440	117.5590	540	143.9768	640	170.3946	740	196.8123	840	223.301
46	46	38.3075	240	65.0157	340	91.3915	440	117.8232	540	144.2410	640	170.6837	740	197.0765	840	223.4942
47	47	38.5632	240	65.2519	340	91.6698	440	118.0874	540	144.5051	640	170.9727	740	197.3407	840	224.1762
48	48	38.8341	240	65.5150	340	91.9338	440	118.3516	540	144.7663	640	171.2729	740	197.6048	840	225.4404
49	49	39.3625	240	65.7802	340	92.1980	440	118.6157	540	145.0355	640	171.5413	740	197.8690	840	226.2868

Units of Weight and Measure—Definitions and Tables of Equivalents

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50	13.20888	150	39.6266	250	66.0444	350	92.4622	450	118.8799	550	145.2977	650	171.7154	750	198.1332	850	224.5510	950	250.9687
1	13.47396	1	39.8908	1	66.3086	1	92.7635	1	119.1441	1	145.5619	1	171.9796	1	198.3974	1	224.8151	1	251.2339
2	13.3724	2	40.1550	2	65.5738	2	92.9905	2	119.4083	2	145.8260	2	172.2438	2	198.6616	2	225.0793	2	251.4971
3	14.00141	3	40.4192	3	65.3369	3	93.6755	3	119.6902	3	145.9557	3	172.5099	3	198.7722	3	225.3435	3	251.1613
4	14.26559	4	40.6834	4	67.1011	4	93.5189	4	119.3366	4	146.3594	4	172.6077	4	199.1859	4	225.6077	4	252.0534
5	14.5974	5	40.9475	5	67.3633	5	93.7330	5	120.2008	5	146.6186	5	173.0363	5	199.4541	5	225.2896	5	252.5538
6	14.79397	6	41.2117	6	67.6295	6	94.0472	6	120.4650	6	146.8827	6	173.3005	6	199.7183	6	226.1360	6	252.8180
7	15.0812	7	41.4759	7	68.8936	7	94.3114	7	120.7292	7	147.1469	7	173.6647	7	200.4020	7	226.4644	7	253.0821
8	15.32230	8	41.7401	8	68.1578	8	94.5556	8	120.9933	8	147.4111	8	173.8289	8	200.2466	8	226.2826	8	253.3463
9	15.56848	9	42.0042	9	68.4220	9	94.8989	9	121.2575	9	147.6753	9	174.0930	9	200.5108	9	226.5136	9	253.4921
60	15.85066	160	42.2684	260	68.6862	360	95.1039	460	121.5217	560	147.9955	660	174.3572	760	200.7750	860	227.1927	960	253.6105
1	16.11483	1	42.5326	1	68.5054	1	95.3881	1	121.7859	1	148.2036	1	174.6214	1	198.0392	1	227.8747	1	254.1389
2	16.37901	2	42.7966	2	69.2145	2	95.6233	2	122.0501	2	148.4787	2	174.8856	2	198.3033	2	227.7211	2	254.3853
3	16.6319	3	43.0609	3	69.4787	3	95.8665	3	122.3142	3	148.7522	3	175.1497	3	198.5767	3	228.4033	3	254.6672
4	16.90737	4	43.3251	4	69.7429	4	96.1006	4	122.5784	4	148.9962	4	175.4139	4	201.8317	4	228.2494	4	254.9314
5	17.17154	5	43.5893	5	70.0071	5	96.4448	5	122.8426	5	149.2603	5	175.5781	5	202.0059	5	228.5136	5	255.1956
6	17.43572	6	43.8535	6	70.2712	6	96.6960	6	123.1068	6	149.5245	6	175.9423	6	202.3600	6	228.7778	6	255.4597
7	17.69990	7	44.1177	7	70.5354	7	96.9332	7	123.3709	7	149.7887	7	176.2053	7	202.6242	7	229.0420	7	255.7239
8	17.96408	8	44.3818	8	70.7996	8	97.2174	8	123.6351	8	150.0529	8	176.4706	8	202.8884	8	225.9881	8	255.9881
9	18.28285	9	44.6460	9	71.0638	9	123.8993	9	150.3171	9	176.7348	9	203.1526	9	229.35703	9	229.5703	9	255.9881
70	18.49243	170	44.9102	270	71.3280	370	97.7457	470	124.1635	570	150.5812	670	176.9990	770	203.4168	870	229.3345	970	256.2523
1	18.75561	1	45.1744	1	71.5921	1	98.0099	1	124.276	1	150.8454	1	177.2632	1	203.6809	1	230.0987	1	256.5164
2	19.20779	2	45.4385	2	71.5563	2	98.2411	2	124.9198	2	151.1096	2	177.5273	2	203.3629	2	230.7806	2	256.7806
3	19.28496	3	45.7027	3	72.1205	3	98.5882	3	124.5650	3	151.3738	3	177.7915	3	204.2993	3	230.6270	3	257.0448
4	19.54914	4	45.9669	4	72.3847	4	98.8024	4	125.2202	4	151.6379	4	178.0557	4	204.4735	4	237.3090	4	257.5732
5	19.8332	5	46.2311	5	72.6488	5	99.0656	5	125.4844	5	151.9021	5	178.3199	5	204.7376	5	231.1554	5	257.8373
6	20.07750	6	46.4953	6	72.9130	6	99.3308	6	125.7485	6	152.1663	6	178.5841	6	205.0018	6	231.4196	6	258.1683
7	20.34168	7	46.7594	7	73.1772	7	99.5507	7	126.0127	7	152.4305	7	178.8482	7	205.5302	7	231.9479	7	258.3657
8	20.65885	8	47.0236	8	73.4414	8	99.8991	8	126.2769	8	152.6947	8	179.1124	8	206.7356	8	232.2121	8	258.6299
9	20.87003	9	47.2878	9	73.7056	9	100.1333	9	126.4411	9	153.9588	9	179.3766	9	205.7944	9	232.2121	9	258.6299
80	21.1321	180	47.5520	280	73.3697	380	100.3875	480	126.3052	580	153.2230	680	179.6408	780	205.0585	880	232.4763	980	258.8940
1	21.39839	1	47.8161	1	74.2339	1	100.6317	1	127.6934	1	153.4872	1	179.1049	1	206.3227	1	232.4224	1	259.1582
2	21.62556	2	48.0803	2	74.4981	2	100.9158	2	128.3336	2	154.7514	2	180.6169	2	206.8046	2	233.0464	2	259.4466
3	21.9674	3	48.3445	3	74.7623	3	101.1800	3	127.5978	3	154.0155	3	180.3333	3	206.8511	3	233.2683	3	259.6866
4	22.10992	4	48.6087	4	75.0264	4	101.4442	4	127.8620	4	154.2797	4	180.6975	4	207.1152	4	233.5330	4	259.5058
5	22.45510	5	48.8729	5	75.2006	5	101.7084	5	128.2161	5	154.5439	5	180.9617	5	207.3794	5	233.7972	5	260.2149
6	22.71927	6	49.1370	6	75.5548	6	101.9726	6	128.3903	6	154.8081	6	181.2258	6	207.6356	6	234.0614	6	260.7433
7	22.9343	7	49.4012	7	75.8190	7	102.2369	7	128.5545	7	155.0723	7	181.5490	7	207.9078	7	234.3555	7	261.0075
8	23.24763	8	49.6654	8	76.0831	8	102.5099	8	128.9187	8	155.3364	8	181.7542	8	208.1719	8	234.5897	8	261.2716
9	23.51181	9	49.9296	9	76.3473	9	102.7651	9	129.1838	9	155.6006	9	182.0184	9	208.4861	9	234.5539	9	261.2716
90	23.77598	190	50.1937	290	76.6115	390	103.0923	490	129.4470	590	155.8648	690	182.2825	790	208.7003	890	235.1181	990	261.5358
1	24.04016	2	50.4579	2	76.7577	2	103.5574	2	129.7934	2	156.1290	2	182.1169	2	209.2587	2	235.0642	2	262.3284
2	24.3034	2	50.7221	3	76.9863	3	103.8248	4	130.0307	2	156.3931	3	186.0751	3	209.4928	3	235.1106	3	262.3284
3	24.56852	4	51.2505	4	77.6682	4	104.0860	4	130.4621	4	156.9215	4	186.3393	4	209.7570	4	236.1748	4	262.5567
4	24.83269	5	51.5146	5	77.9324	5	104.3502	5	130.7679	5	157.1857	5	186.6034	5	210.0212	5	236.3390	5	263.1209
5	25.06687	6	51.7788	6	78.1966	6	104.6143	6	131.0321	6	157.4498	6	187.8676	6	210.2854	6	236.6673	6	263.3851
6	25.36105	7	52.0430	7	78.4607	7	104.8785	7	131.2663	7	157.7140	7	188.1318	7	210.5495	7	237.2315	7	263.6492
7	25.62530	8	52.3072	8	78.7249	8	105.1277	8	131.5604	8	157.9782	8	188.9960	9	211.8037	8	237.2315	9	263.9134
8	25.89440	9	52.5713	9	78.9891	9	105.4669	9	131.2242	9	158.2424	9	189.6601	9	211.0779	9	237.4957	9	263.9134

CAPACITY—BUSHELS TO HECTOLITERS

[Reduction factor: 1 bushel = 0.35238330 hectoliters]

Bushels	Hecto-liters														
0	0	100	35.2383	200	70.4767	300	105.7150	400	140.9533	500	176.1917	600	211.4300	700	246.6683
1	0.35238	110	38.7622	210	74.0005	310	109.2388	410	144.4772	510	179.7155	610	214.9538	710	250.1921
2	0.70477	120	39.1145	220	74.3526	320	109.5912	420	144.8295	520	180.0679	620	215.3662	720	250.4454
3	1.05715	130	36.2955	230	75.5338	330	106.7721	430	142.1105	530	177.2888	630	212.4671	730	247.2731
4	1.40953	140	36.6479	240	71.8862	340	107.145	440	142.3629	540	177.6012	640	212.8835	740	247.7255
5	1.76192	150	37.0002	250	72.2386	350	107.4769	450	142.7152	550	177.9536	650	213.1919	750	248.4302
6	2.11430	160	37.3526	260	72.5910	360	107.8293	460	143.0676	560	178.3060	660	213.5443	760	248.7826
7	2.46668	170	37.7050	270	73.9433	370	108.1817	470	143.4200	570	178.6583	670	213.8867	770	249.1350
8	2.81907	180	38.0574	280	73.2957	380	108.5841	480	143.7724	580	179.0107	680	214.2990	780	249.7357
9	3.14098	190	38.4098	290	73.6481	390	108.8864	490	144.1248	590	179.3651	690	214.6014	790	249.3398
10	3.52383	210	38.7622	300	74.0005	410	109.2388	510	144.4772	610	179.7155	710	249.1398	810	285.0781
11	3.87622	220	39.1145	310	74.3526	420	109.5912	520	144.8295	620	180.0679	720	250.3397	910	320.6688
12	4.22860	230	39.4669	320	74.7053	430	109.9436	530	145.1819	630	180.4203	730	215.6386	910	321.0212
13	4.58098	240	39.8193	330	75.0576	440	110.2960	540	145.5343	640	180.7726	740	216.0110	910	321.3736
14	4.93337	250	40.1717	340	75.4100	450	110.6484	550	145.8867	650	181.1230	750	216.3638	910	321.7260
15	5.28575	260	40.5241	350	75.7624	460	111.0007	560	146.2391	660	181.4774	760	216.7157	910	322.0783
16	5.63813	270	40.8765	360	76.1148	470	111.3531	570	146.5915	670	181.8298	770	217.0081	910	322.4207
17	5.99052	280	41.2288	370	76.4672	480	111.7055	580	146.9438	680	182.1822	780	217.4025	910	322.7831
18	6.34290	290	41.5812	380	76.8196	490	112.0579	590	147.2962	690	182.5346	790	217.7929	910	323.1355
19	6.69528	300	41.9336	390	77.1719	500	112.4103	600	147.6486	700	182.8869	900	218.1253	910	323.4879
20	7.04767	310	42.2860	400	77.5243	510	112.7627	610	148.0010	710	183.2393	810	218.4776	920	288.9533
21	7.40005	320	42.6384	410	77.8767	520	113.1150	620	148.3534	720	183.5917	820	218.8300	920	324.1926
22	7.75243	330	42.9903	420	78.2291	530	113.4674	630	148.7058	730	183.9441	830	219.1824	920	324.8974
23	8.10482	340	43.3431	430	78.5815	540	113.8198	640	149.0581	740	184.2965	840	219.5348	920	325.2495
24	8.45720	350	43.6955	440	79.9339	550	114.1722	650	149.4103	750	184.6489	850	219.8877	920	325.6022
25	8.80938	360	44.0479	450	79.2862	560	114.5246	660	149.7629	760	185.0012	860	220.2396	920	325.9546
26	9.16197	370	44.4003	460	79.6386	570	114.8770	670	150.1153	770	185.3536	870	220.5093	920	326.3066
27	9.51435	380	44.7527	470	79.9910	580	115.2293	680	150.4677	780	185.7060	880	221.2697	920	326.6593
28	9.86673	390	45.1051	480	80.3434	590	115.5817	690	150.8201	790	186.0584	890	221.9443	920	327.0117
29	10.21912	400	45.4574	500	80.6958	600	115.9341	700	151.1724	800	186.4108	900	222.6191	920	327.3641
30	10.57150	130	45.8098	230	81.0482	330	116.2865	430	151.5248	530	186.7631	630	222.0015	730	257.2398
31	10.92388	140	46.1622	240	81.4005	340	116.6389	440	151.8772	540	187.1155	640	222.3339	740	257.5922
32	11.27627	250	46.5146	250	81.7529	350	116.9913	450	152.2296	550	187.4679	650	222.7062	750	257.9446
33	11.62865	260	46.8070	260	82.1053	360	117.3436	460	152.5820	560	187.8203	660	223.0386	760	258.2970
34	11.98103	270	47.1294	270	82.4577	370	117.6960	470	152.9344	570	188.1727	670	223.4110	770	258.6493
35	12.33342	280	47.5717	280	82.8101	380	118.0484	480	153.2867	580	188.5251	680	223.7534	780	258.8877
36	12.68580	290	47.9241	290	83.1625	390	118.4008	490	153.6391	590	188.8774	690	224.1158	790	259.0017
37	13.03818	300	48.2765	300	83.5148	400	118.7332	500	153.9915	600	189.2288	700	224.4882	800	259.3541
38	13.39057	310	48.6289	310	83.8672	410	119.1056	510	154.3439	610	189.5822	710	224.8205	810	259.6879
39	13.74295	320	48.9813	320	84.2196	420	119.4579	520	154.9363	620	189.9346	720	225.1229	820	259.8879
40	14.09533	140	49.3337	240	84.5720	340	119.8103	440	155.4487	540	190.2870	640	225.5553	740	260.7636
41	14.44772	2	49.6860	1	84.9248	2	85.2748	3	155.5734	4	190.9917	5	226.8701	6	261.3544
42	14.80010	2	50.0384	2	85.6298	3	156.1035	4	191.3441	5	192.4103	6	226.1067	7	261.9451
43	15.15208	3	50.3908	3	85.6291	4	156.4582	5	191.6965	6	192.4889	7	226.2975	8	262.4115
44	15.50487	4	50.7432	4	85.9815	5	156.8106	6	192.0489	7	192.8757	8	226.5256	9	262.7172
45	15.85725	5	51.0956	5	86.3339	6	152.5222	7	192.4089	8	193.1660	9	227.0639	10	263.0022
46	16.20963	6	51.4480	6	86.6863	7	151.9246	8	192.4013	9	193.4583	10	228.3546	11	331.2403
47	16.56202	7	51.8003	7	87.0387	8	152.2770	9	192.5357	10	193.1060	11	228.3827	12	334.0594
48	16.91440	8	52.1527	8	87.3911	9	152.6294	10	192.8677	11	193.1060	12	228.3444	13	334.4118
49	17.2678	9	52.5051	9	87.7434	10	152.9318	11	193.2201	12	193.4581	13	228.6658	14	334.1734

Units of Weight and Measure—Definitions and Tables of Equivalents

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50	17.6917	52.8575	250	88.0958	350	123.3342	450	158.5725	550	193.8108	650	229.0491	750	264.2875	850	299.5558	950	334.7641
1	17.97155	53.2699	1	88.4482	2	88.8006	3	89.1530	4	89.5054	5	89.8577	6	90.2101	7	90.5625	8	91.9146
2	18.3393	53.5623	2	88.4482	3	88.8006	4	89.1530	5	89.5054	6	89.8577	7	90.2101	8	90.5625	9	91.9146
3	18.67631	53.9146	3	88.4482	4	88.8006	5	89.1530	6	89.5054	7	89.8577	8	90.2101	9	90.5625	10	91.9146
4	19.0870	54.2570	4	88.4482	5	88.8006	6	89.1530	7	89.5054	8	89.8577	9	90.2101	10	90.5625	11	91.9146
5	19.39108	54.6194	5	88.4482	6	88.8006	7	89.1530	8	89.5054	9	89.8577	10	90.2101	11	90.5625	12	91.9146
6	19.7346	54.9718	6	88.4482	7	88.8006	8	89.1530	9	89.5054	10	89.8577	11	90.2101	12	90.5625	13	91.9146
7	20.05858	55.3342	7	88.4482	8	88.8006	9	89.1530	10	89.5054	11	89.8577	12	90.2101	13	90.5625	14	91.9146
8	20.4823	55.6766	8	88.4482	9	88.8006	10	89.1530	11	89.5054	12	89.8577	13	90.2101	14	90.5625	15	91.9146
9	20.79061	56.0289	9	88.4482	10	88.8006	11	89.1530	12	89.5054	13	89.8577	14	90.2101	15	90.5625	16	91.9146
60	21.14300	56.3813	160	91.6197	360	91.6197	460	91.6197	560	91.6197	660	91.6197	760	91.6197	860	91.6197	960	91.6197
1	21.4538	56.7337	1	91.9720	2	92.3244	3	92.6758	4	93.0292	5	93.1432	6	93.2530	7	93.3416	8	93.4347
2	21.87776	57.0861	2	91.9720	3	92.3244	4	92.6758	5	92.8092	6	93.0292	7	93.1432	8	93.2530	9	93.3416
3	22.20015	57.4485	3	91.9720	4	92.3244	5	92.6758	6	92.8092	7	93.0292	8	93.1432	9	93.2530	10	93.3416
4	22.5253	57.7909	4	91.9720	5	92.3244	6	92.6758	7	92.8092	8	93.0292	9	93.1432	10	93.2530	11	93.3416
5	22.90491	58.1432	5	91.9720	6	92.3244	7	92.6758	8	92.8092	9	93.0292	10	93.1432	11	93.2530	12	93.3416
6	23.25730	58.4956	6	91.9720	7	92.3244	8	92.6758	9	92.8092	10	93.0292	11	93.1432	12	93.2530	13	93.3416
7	23.60968	58.8480	7	91.9720	8	92.3244	9	92.6758	10	92.8092	11	93.0292	12	93.1432	13	93.2530	14	93.3416
8	23.92026	59.2004	8	91.9720	9	92.3244	10	92.6758	11	92.8092	12	93.0292	13	93.1432	14	93.2530	15	93.3416
9	24.31445	59.5528	9	91.9720	10	92.3244	11	92.6758	12	92.8092	13	93.0292	14	93.1432	15	93.2530	16	93.3416
70	24.66683	59.9052	170	94.1435	370	95.4939	470	100.3818	570	100.3818	670	100.3818	770	100.3818	870	100.3818	970	100.3818
1	25.0921	60.2575	1	95.4939	2	95.8483	3	96.2006	4	96.5530	5	96.9054	6	97.2578	7	97.6102	8	98.0632
2	25.37160	60.6099	2	95.4939	3	95.8483	4	96.2006	5	96.5530	6	96.9054	7	97.2578	8	97.6102	9	98.0632
3	25.72398	60.9623	3	95.4939	4	95.8483	5	96.2006	6	96.5530	7	96.9054	8	97.2578	9	97.6102	10	98.0632
4	26.07636	61.3147	4	95.4939	5	95.8483	6	96.2006	7	96.5530	8	96.9054	9	97.2578	10	97.6102	11	98.0632
5	26.42875	61.6671	5	95.4939	6	95.8483	7	96.2006	8	96.5530	9	96.9054	10	97.2578	11	97.6102	12	98.0632
6	26.71113	62.0195	6	95.4939	7	95.8483	8	96.2006	9	96.5530	10	96.9054	11	97.2578	12	97.6102	13	98.0632
7	27.13351	62.3718	7	95.4939	8	95.8483	9	96.2006	10	96.5530	11	96.9054	12	97.2578	13	97.6102	14	98.0632
8	27.45890	62.7242	8	95.4939	9	95.8483	10	96.2006	11	96.5530	12	96.9054	13	97.2578	14	97.6102	15	98.0632
9	27.83828	63.0766	9	95.4939	10	95.8483	11	96.2006	12	96.5530	13	96.9054	14	97.2578	15	97.6102	16	98.0632
80	28.19066	63.4290	280	98.6673	380	133.9057	480	169.1440	580	169.1440	680	169.1440	780	169.1440	880	169.1440	980	169.1440
1	28.54935	63.7814	1	99.1937	2	99.3721	3	99.6728	4	99.7245	5	99.7741	6	99.8240	7	99.8737	8	99.9234
2	28.85453	64.1338	2	99.1937	3	99.3721	4	99.6728	5	99.7245	6	99.7741	7	99.8240	8	99.8737	9	99.9234
3	29.24781	64.4861	3	99.1937	4	99.3721	5	99.6728	6	99.7245	7	99.7741	8	99.8240	9	99.8737	10	99.9234
4	29.60220	64.8385	4	99.1937	5	99.3721	6	99.6728	7	99.7245	8	99.7741	9	99.8240	10	99.8737	11	99.9234
5	29.95258	65.1909	5	99.1937	6	99.3721	7	99.6728	8	99.7245	9	99.7741	10	99.8240	11	99.8737	12	99.9234
6	30.30496	65.5433	6	99.1937	7	99.3721	8	99.6728	9	99.7245	10	99.7741	11	99.8240	12	99.8737	13	99.9234
7	30.65735	65.8957	7	99.1937	8	99.3721	9	99.6728	10	99.7245	11	99.7741	12	99.8240	13	99.8737	14	99.9234
8	31.00973	66.2481	8	99.1937	9	99.3721	10	99.6728	11	99.7245	12	99.7741	13	99.8240	14	99.8737	15	99.9234
9	31.36211	66.6004	9	99.1937	10	99.3721	11	99.6728	12	99.7245	13	99.7741	14	99.8240	15	99.8737	16	99.9234
90	31.71450	66.9528	190	102.1912	390	137.4295	490	172.6678	590	172.6678	690	172.6678	790	172.6678	890	172.6678	990	172.6678
1	32.06688	67.3052	1	102.1912	2	102.5435	3	103.0202	4	103.5022	5	103.9822	6	104.4622	7	104.9422	8	105.4222
2	32.4926	67.6576	2	102.1912	3	102.5435	4	103.0202	5	103.4866	6	103.9280	7	104.3700	8	104.8120		
3	32.77165	68.0176	3	102.1912	4	102.5435	5	103.0202	6	103.4866	7	103.9280	8	104.3700	9	104.8120		
4	33.12403	68.3624	4	102.1912	5	102.5435	6	103.0202	7	103.4866	8	103.9280	9	104.3700	10	104.8120		
5	33.47641	68.7147	5	102.1912	6	102.5435	7	103.0202	8	103.4866	9	103.9280	10	104.3700	11	104.8120		
6	33.83880	69.0871	6	102.1912	7	102.5435	8	103.0202	9	103.4866	10	103.9280	11	104.3700	12	104.8120		
7	34.18118	69.4195	7	102.1912	8	102.5435	9	103.0202	10	103.4866	11	103.9280	12	104.3700	13	104.8120		
8	34.53356	69.7719	8	102.1912	9	102.5435	10	103.0202	11	103.4866	12	103.9280	13	104.3700	14	104.8120		
9	34.88595	70.1243	9	102.1912	10	102.5435	11	103.0202	12	103.4866	13	103.9280	14	104.3700	15	104.8120		

CAPACITY—HECTOLITERS TO BUSHELS

[Reduction factor: 1 hectoliter = 2.837839 bushels]

	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	Hecto-liters	Bushels	
0	100	233.782	200	567.564	300	851.346	400	1,135.128	500	1,418.909	600	1,702.691	700	1,986.473	
1	2,8378	567.620	1	570.402	2	573.239	3	576.077	4	582.915	5	588.755	6	594.593	
2	5,6756	2,839.458	2	2,837.021	3	2,837.183	4	2,837.021	5	2,837.021	6	2,837.021	7	2,837.021	
3	8,5135	2,929.295	3	2,917.836	4	2,905.133	5	2,893.573	6	2,882.089	7	2,870.647	8	2,859.205	
4	11,3513	4,265.133	5	297.971	6	581.753	7	587.591	8	593.435	9	599.277	10	605.119	
5	14,1891	6,300.809	6	587.429	7	871.210	8	874.048	9	876.886	10	893.104	11	909.322	
6	17,0269	7,333.647	7	787.429	8	590.266	9	593.104	10	596.068	11	601.950	12	607.832	
7	19,8647	8,366.484	8	22.70264	9	309.322	10	595.942	11	598.780	12	601.618	13	604.455	
8	25,5404	9,399.322	9	9	400	400	410	410	410	410	410	410	410	410	
10	28.3782	312.160	210	595.942	310	879.724	410	1,163.506	510	1,447.288	610	1,731.070	710	2,014.851	
1	31.2160	314.998	2	317.836	3	320.674	4	323.511	5	327.293	6	331.131	7	335.070	
2	34.0538	326.625	3	329.495	4	332.333	5	335.171	6	338.009	7	341.847	8	345.685	
3	36.8916	337.007	4	339.845	5	342.683	6	345.521	7	348.359	8	351.197	9	354.035	
4	39.7295	349.567	5	352.405	6	355.243	7	358.082	8	360.920	9	363.758	10	366.596	
5	42.5673	361.401	6	329.187	7	332.025	8	334.863	9	337.700	10	340.538	11	343.376	
6	45.4051	364.239	7	615.807	8	618.645	9	621.482	10	624.320	11	627.158	12	630.996	
7	48.2429	367.077	8	344.863	9	347.700	10	350.538	11	353.376	12	356.214	13	359.052	
8	51.0807	370.906	9	353.916	10	356.751	11	359.589	12	362.426	13	365.671	14	368.502	
9	53.9186	374.733	10	359.669	11	362.507	12	365.345	13	368.183	14	370.915	15	373.727	
20	56.7564	312.00	220	624.320	320	908.102	420	1,191.884	520	1,475.666	620	1,759.448	720	2,043.230	
1	59.5924	313.376	2	62.4320	3	63.296	4	64.172	5	65.051	6	65.930	7	66.809	
2	65.2698	317.836	3	63.284	4	63.571	5	63.855	6	64.131	7	64.409	8	64.687	
3	68.1077	321.890	4	63.107	5	63.384	6	63.665	7	63.945	8	64.224	9	64.503	
4	70.9455	325.727	5	63.733	6	64.141	7	64.519	8	64.898	9	65.277	10	65.656	
5	73.7833	329.565	6	64.185	7	64.604	8	64.987	9	65.365	10	65.745	11	66.124	
6	76.6211	333.403	7	64.231	8	64.747	9	65.129	10	65.505	11	65.883	12	66.262	
7	79.4839	337.241	8	64.263	9	64.930	10	65.380	11	65.757	12	66.138	13	66.516	
8	82.2967	341.079	9	366.079	10	64.969	11	65.642	12	66.026	13	66.390	14	66.764	
9	85.1346	344.916	10	655.536	11	658.374	12	661.212	13	664.050	14	666.832	15	669.606	
30	130	371.754	230	652.698	330	936.480	430	1,220.262	530	1,504.044	630	1,787.826	730	2,071.608	
1	87.9724	374.592	2	374.592	3	377.430	4	380.268	5	383.106	6	385.944	7	388.782	
2	90.8102	380.808	3	380.808	4	384.650	5	386.488	6	388.322	7	390.156	8	391.984	
3	93.6480	387.430	4	387.430	5	390.268	6	393.106	7	395.944	8	398.776	9	401.608	
4	96.4858	393.237	5	383.106	6	386.887	7	390.669	8	393.507	9	396.345	10	399.177	
5	99.3327	395.943	6	385.943	7	388.781	8	392.625	9	395.461	10	398.303	11	401.145	
6	102.1615	400.993	7	391.619	8	395.401	9	398.239	10	401.021	11	403.755	12	406.487	
7	104.9933	407.8371	8	391.619	9	394.457	10	402.021	11	404.829	12	407.661	13	410.493	
8	107.8371	414.322	9	400.959	10	417.147	11	423.977	12	430.811	13	437.744	14	444.671	
9	110.6749	422.835	10	422.835	11	429.170	12	435.003	13	441.836	14	448.669	15	455.502	
40	133.5128	420	397.295	410	694.858	410	1,248.640	510	1,535.422	610	1,816.204	740	2,099.986	940	2,667.550
1	140.112	400.132	2	140.132	3	142.954	4	145.776	5	148.596	6	151.419	7	154.242	
2	149.1884	402.970	3	405.808	4	973.372	5	1,125.316	6	1,254.936	7	1,382.499	8	1,509.663	
3	152.026	405.808	4	406.646	5	976.410	6	1,129.154	7	1,259.902	8	1,389.281	9	1,517.119	
4	154.8640	412.488	5	411.484	6	979.048	7	1,126.667	8	1,256.667	9	1,385.397	10	1,517.557	
5	157.5097	414.322	6	981.885	7	1,231.613	8	1,234.451	9	1,237.293	10	1,240.155	11	1,243.023	
6	160.177	417.019	7	1,231.613	8	1,237.293	9	1,240.127	10	1,242.909	11	1,245.775	12	1,248.640	
7	162.7019	420.597	8	1,245.803	9	1,245.803	10	1,248.640	11	1,251.487	12	1,254.255	13	1,257.023	
8	165.2395	423.377	9	1,251.487	10	1,254.255	11	1,257.023	12	1,260.791	13	1,263.559	14	1,266.327	
9	167.8757	426.155	10	1,254.255	11	1,257.023	12	1,260.791	13	1,263.559	14	1,266.327	15	1,269.097	

50	141.8909	150	425.673	250	709.455	350	993.237	450	1,277.019	550	1,560.800	650	1,844.582	750	2,128.364	850	2,412.146
1	144.2288	2	428.511	1	712.283	2	996.074	1	1,279.856	2	1,563.638	1	1,847.420	1	2,131.202	1	2,411.824
2	147.5666	2	431.148	2	715.150	2	998.912	2	1,282.694	2	1,566.476	2	1,850.258	2	2,134.040	2	2,417.822
3	150.4044	3	434.186	3	717.968	3	1,001.750	3	1,285.532	3	1,569.314	3	1,853.056	3	2,136.878	3	2,420.660
4	153.2422	4	437.024	4	720.806	4	1,004.486	4	1,281.370	4	1,572.152	4	1,854.934	4	2,139.715	4	2,707.279
5	156.0890	5	439.862	5	723.644	5	1,007.426	5	1,291.208	5	1,574.989	5	1,858.771	5	2,142.553	5	2,426.335
6	158.9179	6	442.700	6	726.482	6	1,007.264	6	1,294.045	6	1,577.827	6	1,864.447	6	2,145.391	6	2,427.173
7	161.7557	7	445.538	7	729.319	7	1,013.101	7	1,296.883	7	1,580.665	7	1,864.220	7	2,148.220	7	2,432.011
8	164.5935	8	448.375	8	732.157	8	1,015.939	8	1,299.721	8	1,582.503	8	1,867.285	8	2,151.067	8	2,434.849
9	167.4313	9	451.213	9	734.995	9	1,018.777	9	1,302.559	9	1,586.341	9	1,870.123	9	2,153.905	9	2,437.686
60	170.2691	160	454.051	260	730.179	360	1,021.615	460	1,205.397	560	1,589.179	660	1,872.960	760	2,136.742	860	2,440.524
1	173.1070	1	456.889	1	740.671	1	1,024.553	1	1,208.235	1	1,592.016	1	1,875.798	1	2,139.580	1	2,443.362
2	175.9448	2	459.727	2	743.509	2	1,027.290	2	1,211.072	2	1,594.854	2	1,878.636	2	2,142.418	2	2,446.200
3	178.7826	3	462.564	3	746.346	3	1,030.128	3	1,213.910	3	1,597.692	3	1,881.474	3	2,145.256	3	2,449.038
4	181.6204	4	465.402	4	749.184	4	1,032.966	4	1,216.748	4	1,600.530	4	1,884.312	4	2,148.094	4	2,451.876
5	184.4582	5	468.240	5	752.032	5	1,035.804	5	1,219.586	5	1,603.366	5	1,887.130	5	2,150.931	5	2,454.713
6	187.2960	6	471.078	6	754.860	6	1,038.642	6	1,222.424	6	1,606.206	6	1,889.967	6	2,152.769	6	2,457.551
7	190.1339	7	473.916	7	757.698	7	1,041.380	7	1,225.261	7	1,609.043	7	1,892.825	7	2,154.607	7	2,454.171
8	192.9717	8	476.754	8	760.535	8	1,044.173	8	1,228.099	8	1,611.881	8	1,895.663	8	2,157.445	8	2,456.227
9	195.8095	9	479.591	9	763.373	9	1,047.155	9	1,330.937	9	1,614.719	9	1,898.501	9	2,152.283	9	2,459.847
70	198.6473	170	482.429	270	766.211	370	1,049.993	470	1,330.775	570	1,617.557	670	1,901.339	770	2,185.121	870	2,468.902
1	201.1851	1	485.267	2	769.049	2	1,052.831	2	1,336.613	2	1,620.395	2	1,904.176	2	2,187.958	2	2,471.740
2	204.3230	2	488.105	2	771.887	2	1,055.669	2	1,339.451	2	1,623.232	2	1,907.014	2	2,189.720	2	2,474.578
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	2,190.634	3	2,476.198
4	209.9986	4	493.780	4	777.562	4	1,061.444	4	1,345.126	4	1,628.908	4	1,912.690	4	2,196.472	4	2,480.254
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
6	215.6742	6	499.456	6	783.238	6	1,067.020	6	1,350.802	6	1,634.584	6	1,918.366	6	2,202.147	6	2,486.873
7	218.5121	7	502.294	7	786.076	7	1,069.858	7	1,353.640	7	1,637.422	7	1,921.203	7	2,204.985	7	2,488.767
8	221.3499	8	505.132	8	788.914	8	1,072.696	8	1,356.477	8	1,640.259	8	1,924.041	8	2,207.823	8	2,491.005
9	224.1877	9	507.970	9	791.751	9	1,075.333	9	1,359.315	9	1,643.097	9	1,927.879	9	2,210.661	9	2,494.443
80	227.0255	180	510.807	280	794.589	380	1,078.371	480	1,362.153	580	1,645.935	680	1,929.717	780	2,213.499	880	2,497.281
1	229.8633	1	513.645	1	797.427	2	1,084.047	2	1,367.829	2	1,651.611	2	1,931.393	2	2,219.174	2	2,502.956
2	232.7012	2	516.483	2	800.265	3	1,086.885	3	1,370.667	3	1,654.448	3	1,938.230	3	2,220.012	3	2,505.794
3	235.5390	3	519.321	3	803.103	4	1,089.722	4	1,373.504	4	1,657.286	4	1,941.068	4	2,224.850	4	2,508.632
4	238.3768	4	522.159	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	241.2146	5	524.996	6	811.616	6	1,095.398	6	1,379.180	6	1,662.962	6	1,946.744	6	2,230.526	6	2,514.308
6	244.0524	6	527.834	7	814.454	7	1,098.236	7	1,382.018	7	1,665.802	7	1,949.582	7	2,233.363	7	2,517.145
7	246.8922	7	530.672	8	817.292	8	1,101.074	8	1,384.856	8	1,668.638	8	1,952.419	8	2,236.201	8	2,519.983
8	249.7281	9	533.510	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	252.3659	9	536.348	9	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
90	255.4037	190	539.186	290	822.967	390	1,109.587	490	1,393.369	590	1,677.151	690	1,960.933	790	2,244.715	890	2,528.497
1	258.2415	1	542.023	2	825.805	2	1,112.425	2	1,396.207	2	1,682.827	2	1,963.771	2	2,247.553	2	2,531.334
2	261.0793	2	544.861	3	831.481	3	1,115.653	3	1,399.045	3	1,682.609	3	1,966.609	3	2,250.390	3	2,534.172
3	263.9172	3	547.699	4	834.319	4	1,118.101	4	1,401.883	4	1,685.664	4	1,969.446	4	2,253.228	4	2,537.010
4	266.7550	4	550.537	5	837.157	5	1,123.775	5	1,404.728	5	1,688.502	5	1,972.284	5	2,256.066	5	2,539.848
5	269.5928	5	553.375	6	839.984	6	1,126.776	6	1,407.558	6	1,691.340	6	1,975.122	6	2,258.904	6	2,542.686
6	272.4306	6	556.213	7	842.822	7	1,126.614	7	1,410.396	7	1,694.178	7	1,977.960	7	2,261.742	7	2,545.524
7	275.2684	8	561.050	8	845.670	8	1,126.234	8	1,413.552	8	1,697.016	8	1,980.798	8	2,264.579	8	2,548.361
8	278.1063	9	561.888	9	848.508	9	1,122.290	9	1,416.072	9	1,699.854	9	1,983.635	9	2,267.417	9	2,551.199

Circular of the Bureau of Standards

MASS—AVOIRDUPOIS POUNDS TO KILOGRAMS

[Reduction factor: 1 avoirdupois pound = 0.4535924277 kilogram]

Pounds Kilos				Pounds Kilos				Pounds Kilos				Pounds Kilos			
0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
0	45.35924	90.71849	136.07773	181.43697	226.79621	272.15346	317.51470	362.87394	408.23318	453.59242	498.93166	544.27090	589.54914	634.82838	679.10762
1	45.81284	91.17208	136.53132	181.80566	227.49810	272.60095	317.96253	363.32753	408.68678	454.01202	499.35127	544.63037	589.90366	635.17213	680.44037
2	46.26643	91.62567	136.98491	182.34416	227.70340	273.06264	318.42188	363.78113	409.59367	455.02397	499.75935	545.29207	589.94077	635.56234	680.81037
3	46.72002	92.07926	137.43851	182.75975	228.15689	273.51623	318.78748	364.23472	410.04745	455.99367	499.93166	545.88331	589.98331	635.86234	681.04745
4	47.17361	92.52386	137.89210	183.25134	228.61058	273.96837	319.32907	365.68831	410.40745	456.34837	499.98331	546.22307	589.98331	636.04745	681.20745
5	47.62720	93.40076	138.34569	183.70493	229.06418	274.42342	319.78266	365.14190	410.50115	456.75935	499.98331	546.59550	589.98331	636.40949	681.40833
6	48.08080	93.84006	138.79928	184.35853	229.51776	274.87701	320.23625	366.04985	410.95477	457.08833	499.98331	547.08833	589.98331	636.80652	681.70745
7	48.53349	94.30722	139.25288	184.61212	229.97136	275.33606	320.68985	366.49497	411.40833	457.48633	499.98331	547.48633	589.98331	637.20745	682.00652
8	48.98798	94.80882	140.16606	185.06571	230.42465	275.78420	321.14344	366.86192	411.86192	457.88633	499.98331	547.88633	589.98331	637.60652	682.38652
9	49.44157	94.86233	140.59390	185.59390	230.87955	276.23779	321.50703	367.09527	412.31552	458.39527	499.98331	548.39527	589.98331	638.00652	682.70652
10	49.89517	210	95.25441	186.46165	231.0	186.46269	231.32714	276.69138	322.05622	367.40937	412.76911	458.76911	499.98331	548.76911	589.98331
11	49.3592	110	96.70800	186.61725	231.1	186.83008	231.78573	277.14937	322.50422	367.83636	413.22270	459.22270	499.98331	549.22270	589.98331
12	49.89517	110	96.80235	186.52084	231.2	186.83008	232.39392	277.59857	322.95781	368.31705	413.67629	459.67629	499.98331	549.67629	589.98331
13	50.44311	120	96.16159	186.52084	231.3	187.33567	232.69292	278.05216	323.41140	368.77064	414.12989	459.12989	499.98331	549.12989	589.98331
14	50.89670	120	96.51594	186.61519	231.4	187.78727	233.14651	278.50875	323.86499	369.22424	414.58348	459.58348	499.98331	549.58348	589.98331
15	51.35029	120	96.66878	186.62802	231.5	188.23287	233.60010	279.59534	324.30152	369.67733	415.03707	459.93166	499.98331	549.93166	589.98331
16	51.70954	120	96.76151	186.64945	231.6	188.69415	234.05369	279.91294	324.77218	370.13122	415.49426	459.94426	499.98331	549.94426	589.98331
17	52.16313	120	96.80389	186.75956	231.7	188.78808	234.50729	280.25257	325.05092	370.50501	415.94426	459.94426	499.98331	549.94426	589.98331
18	52.52388	120	96.86233	186.92956	231.8	189.01613	234.96088	280.32012	325.67937	371.03861	416.39785	459.39785	499.98331	549.39785	589.98331
19	52.97458	120	96.97107	187.10707	231.9	189.33674	235.41447	280.77371	326.13296	371.49220	416.85144	459.85144	499.98331	549.85144	589.98331
20	53.42391	120	97.02470	187.30393	232.0	189.79033	235.86806	281.22731	326.58655	372.0	417.30503	459.98331	499.98331	549.98331	589.98331
21	53.87592	120	97.08000	187.46165	232.1	189.87207	236.32465	281.68080	327.04043	372.39938	418.21222	459.21222	499.98331	549.21222	589.98331
22	54.33259	120	97.16159	187.52084	232.2	190.05671	236.77525	282.05671	327.49373	372.83080	418.66581	459.66581	499.98331	549.66581	589.98331
23	54.78952	120	97.25441	187.61519	232.3	190.33521	237.22884	282.48665	328.00992	373.00916	419.11940	459.11940	499.98331	549.11940	589.98331
24	55.24633	120	97.34033	187.67725	232.4	190.46239	237.68243	282.84667	328.40092	373.60016	419.57300	459.57300	499.98331	549.57300	589.98331
25	55.69322	120	97.42391	187.73940	232.5	190.59523	238.13602	283.24635	329.08108	374.66735	420.42020	459.42020	499.98331	549.42020	589.98331
26	56.14166	120	97.50095	187.80189	232.6	190.73265	238.59662	283.69486	329.76169	375.12094	420.93377	459.93377	499.98331	549.93377	589.98331
27	56.59852	120	97.57656	187.87113	232.7	190.85237	239.04321	284.04245	330.15259	375.54753	421.30737	459.30737	499.98331	549.30737	589.98331
28	57.05624	120	97.64624	187.93709	232.8	190.91975	239.47339	284.45680	330.50939	376.02812	421.83873	459.83873	499.98331	549.83873	589.98331
29	57.51367	120	97.72000	188.00188	232.9	191.07756	239.90339	284.88064	330.66688	376.52812	422.31749	459.31749	499.98331	549.31749	589.98331
30	57.96100	120	97.79777	188.07207	233.0	191.23919	239.95039	285.30964	331.02812	377.02812	422.80456	459.80456	499.98331	549.80456	589.98331
31	58.40917	120	97.86233	188.13921	233.1	191.39756	240.40389	285.76332	331.22447	377.48171	423.20455	459.20455	499.98331	549.20455	589.98331
32	58.85682	120	97.93903	188.20767	233.2	191.56311	240.83911	286.21682	331.52094	377.85938	423.68116	459.68116	499.98331	549.68116	589.98331
33	59.30457	120	98.00389	188.27500	233.3	191.73207	241.11117	286.63295	331.81749	378.23802	424.05774	459.05774	499.98331	549.05774	589.98331
34	59.75232	120	98.07000	188.34241	233.4	191.89111	241.47676	287.01760	332.10217	378.61443	424.43417	459.43417	499.98331	549.43417	589.98331
35	60.19997	120	98.13777	188.40976	233.5	192.05652	241.84236	287.38198	332.40266	379.00197	424.81174	459.81174	499.98331	549.81174	589.98331
36	60.64782	120	98.20661	188.47720	233.6	192.22394	242.10701	287.75725	332.70295	379.38198	425.18814	460.18814	499.98331	549.18814	589.98331
37	61.09567	120	98.27334	188.54462	233.7	192.39269	242.37265	288.13199	333.00266	380.76123	425.56533	460.56533	499.98331	549.56533	589.98331
38	61.54352	120	98.34033	188.61204	233.8	192.56024	242.63829	288.50701	333.30295	381.14177	425.94287	460.94287	499.98331	549.94287	589.98331
39	61.99137	120	98.40797	188.67879	233.9	192.72765	242.90369	288.88238	333.60326	381.52077	426.32037	461.32037	499.98331	549.32037	589.98331
40	62.43922	120	98.47573	188.74620	234.0	192.89511	243.16904	289.25760	333.90350	381.90197	426.70747	461.70747	499.98331	549.70747	589.98331
41	62.88707	120	98.54352	188.81379	234.1	193.06352	243.43546	290.63222	334.20787	382.28545	430.17644	462.17644	499.98331	549.17644	589.98331
42	63.33487	120	98.61142	188.88122	234.2	193.23194	243.69987	291.00342	334.50774	382.66116	430.56533	462.56533	499.98331	549.56533	589.98331
43	63.78272	120	98.67937	188.94982	234.3	193.40027	244.07625	291.37525	334.80701	383.04633	431.04417	463.04417	499.98331	549.04417	589.98331
44	64.23058	120	98.74717	189.01702	234.4	193.57379	244.44266	291.75501	335.10217	383.42417	431.42417	463.42417	499.98331	549.42417	589.98331
45	64.67852	120	98.81437	189.08452	234.5	193.72765	244.80904	292.13295	335.40266	383.80350	431.80350	463.80350	499.98331	549.80350	589.98331
46	65.12633	120	98.88122	189.15183	234.6	193.89111	245.17546	292.50701	335.70295	384.18177	432.28177	464.28177	499.98331	549.28177	589.98331
47	65.57407	120	98.94982	189.21987	234.7	194.05652	245.54286	292.88238	336.00266	384.56102	432.66102	464.66102	499.66102	549.66102	589.98331
48	66.02182	120	99.01702	189.28733	234.8	194.22394	245.91928	293.25760	336.30222	384.93354	433.19273	464.19273	499.19273	549.19273	589.98331
49	66.46952	120	99.08452	189.35492	234.9	194.39352	246.29573	293.63222	336.60222	385.26116	433.60222	464.60222	499.60222	549.60222	589.98331
50	66.91731	120	99.15182	189.42242	235.0	194.56024	246.67213	294.00342	336.90217	385.67042	434.07042	464.07042	499.07042	549.07042	589.98331
51	67.36517	120	99.21987	189.48982	235.1	194.73194	247.04852	294.37525	337.20787	386.05804	434.45804	464.45804	499.45804	549.45804	589.98331
52	67.81302	120	99.28733	189.55652	235.2	194.90702	247.42566	294.75501	337.50774	386.43633	434.83633	464.83633	499.83633	549.83633	589.98331
53	68.26087	120	99.35492	189.62416	235.3	195.07502	247.79265	295.13295	337.80701	386.81502	435.21502	465.21502	499.21502	549.21502	589.98331
54	68.70862	120	99.42243	189.69202	235.4	195.24243	248.16904	295.50774							

50	22.67962	250	68.03886	113.39811	350	158.75735	450	204.11659	550	249.47584	650	294.83508	750	340.19432	850	385.55356	950	430.91281
51	23.13321	251	68.49246	113.85170	351	159.21094	451	204.70108	551	249.92943	651	295.28867	751	340.66791	851	386.00716	951	431.36641
52	23.56831	252	68.94605	114.30529	352	159.66433	452	204.23738	552	250.33032	652	295.47426	752	341.10151	852	386.16075	952	431.81199
53	24.09240	253	69.39964	114.75888	353	160.11813	453	205.17373	553	250.83661	653	296.19586	753	341.55510	853	386.91434	953	432.27358
54	24.49339	254	69.85323	115.21248	354	160.5712	454	205.29020	554	251.28020	654	296.64945	754	342.00869	854	387.36793	954	432.72718
55	24.97578	255	70.30683	115.66607	355	161.02531	455	206.38455	555	251.74380	655	297.46228	755	342.46228	855	387.82553	955	433.18077
56	25.40118	256	70.70042	116.11966	356	161.47890	456	206.38915	556	252.19739	656	297.55663	756	342.91588	856	388.27512	956	433.63236
57	25.83477	257	71.21401	116.57325	357	162.00010	457	207.69743	557	252.65098	657	298.01022	757	343.36947	857	388.12871	957	433.86795
58	26.30836	258	71.66760	117.02685	358	162.38699	458	207.88657	558	253.10457	658	298.63822	758	343.82306	858	389.18230	958	434.54155
59	27.19195	259	72.12120	117.48044	359	162.85968	459	207.9892	559	253.55817	659	298.19141	759	343.27665	859	389.63890	959	434.99514
60	27.21555	260	72.57479	117.93403	360	163.07227	460	208.65252	560	254.01176	660	299.37100	760	344.70325	860	390.08948	960	435.44873
61	27.66914	261	73.02838	118.38762	361	163.74687	461	209.10611	561	254.46535	661	299.82459	761	345.13834	861	390.54023	961	435.90232
62	28.12273	262	73.48197	118.84122	362	164.20465	462	209.55970	562	254.91894	662	300.27819	762	345.63743	862	390.99657	962	436.55952
63	28.57632	263	73.93557	119.29481	363	164.65405	463	210.01329	563	255.31254	663	300.73178	763	346.09102	863	391.15527	963	436.60951
64	29.0924	264	74.38916	119.74840	364	165.10764	464	210.46889	564	255.86013	664	301.18537	764	346.54461	864	391.30386	964	437.26310
65	29.48351	265	74.84275	120.20408	365	165.56124	465	210.20408	565	256.27972	665	301.88696	765	347.71669	865	392.35745	965	437.17029
66	29.93710	266	74.9994	121.20634	366	166.01483	466	211.37407	566	256.73331	666	302.99256	766	347.45180	866	392.81104	966	438.17229
67	30.30699	267	75.47994	121.90198	367	166.48842	467	211.72266	567	257.18691	667	302.99744	767	348.33898	867	393.26663	967	438.62288
68	30.84429	268	76.20353	121.56277	368	166.92426	468	212.38126	568	257.64050	668	303.99409	768	348.81258	868	393.71233	968	439.33106
69	31.29788	269	76.65712	122.01636	369	167.37561	469	212.73485	569	258.10533	669	303.80549	769	349.17182	869	394.1782	969	439.53106
70	31.75147	270	77.11071	122.46996	370	167.82920	470	213.18844	570	258.54768	670	303.06993	770	349.26617	870	394.62541	970	439.98465
71	32.20506	271	77.56431	122.93535	371	168.28271	471	213.64503	571	259.00128	671	304.06052	771	349.71976	871	395.07900	971	440.48025
72	32.68665	272	78.01790	123.37714	372	168.73638	472	214.09563	572	259.45487	672	304.81411	772	350.17335	872	395.33620	972	440.89184
73	33.11225	273	78.47149	123.83073	373	169.18998	473	214.49225	573	259.90846	673	305.26770	773	350.62695	873	395.38619	973	441.35453
74	33.5584	274	78.92559	124.28433	374	169.64357	474	214.90281	574	260.36205	674	305.72130	774	351.08054	874	396.13378	974	441.79002
75	34.01943	275	79.37867	124.73792	375	170.09716	475	215.45640	575	260.81565	675	306.17489	775	351.53415	875	396.89337	975	442.25262
76	34.47302	276	79.83227	125.19151	376	170.50075	476	215.10000	576	261.26924	676	306.32848	776	351.98772	876	397.14497	976	442.70621
77	34.96662	277	80.25856	125.64510	377	171.00404	477	216.65359	577	261.72233	677	307.08207	777	352.44132	877	397.80556	977	443.15826
78	35.38021	278	80.73945	126.16986	378	171.45794	478	216.81718	578	262.17642	678	307.53567	778	352.89491	878	398.13339	978	444.06699
79	35.83380	279	81.19304	126.55229	379	171.91153	479	216.63002	579	262.63002	679	307.88927	779	353.88450	879	398.70774	979	444.66699
80	36.23739	280	81.64664	127.00588	380	172.36512	480	217.72437	580	263.03861	680	308.44285	780	353.80209	880	399.16134	980	444.52058
81	36.74099	281	82.10023	127.45947	381	172.81871	481	218.17796	581	263.53720	681	308.89644	781	354.25569	881	399.61993	981	445.97417
82	37.19458	282	82.55382	127.91306	382	173.22731	482	218.61315	582	263.90075	682	309.35063	782	354.70928	882	400.06552	982	445.42776
83	37.68187	283	83.00741	128.36666	383	173.7590	483	219.08514	583	264.44439	683	309.80363	783	355.16287	883	400.52211	983	445.88136
84	38.10176	284	83.46101	128.82025	384	174.17949	484	219.53874	584	264.89798	684	310.25722	784	355.61646	884	400.97571	984	446.23395
85	38.55626	285	83.91460	129.27384	385	174.63038	485	219.99233	585	265.33157	685	310.71081	785	356.02006	885	401.42930	985	446.78854
86	39.00895	286	84.36819	129.72733	386	175.08668	486	220.44922	586	265.80516	686	311.16441	786	356.52306	886	401.88289	986	447.24213
87	39.46254	287	84.82178	130.18103	387	175.54027	487	221.35310	587	266.22876	687	311.68000	787	356.97724	887	407.33468	987	447.69737
88	39.91613	288	85.25738	130.64489	388	176.09386	488	221.35310	588	266.71235	688	312.07159	788	357.43083	888	408.14932	988	448.14932
89	40.36973	289	85.72897	131.08231	389	176.44745	489	221.80670	589	267.61953	689	312.52518	789	357.88445	889	408.24367	989	448.60291
90	40.83332	290	86.18256	131.54180	390	176.90105	490	222.26029	590	267.61953	690	312.7878	790	358.33892	890	408.69726	990	449.05650
91	41.27691	291	86.63615	131.95540	391	177.33464	491	222.1388	591	268.07312	691	313.42327	791	358.79161	891	409.15085	991	449.51010
92	41.74050	292	87.08975	132.44899	392	177.80823	492	223.16147	592	268.52672	692	313.88596	792	359.24520	892	409.60445	992	449.96369
93	42.18410	293	87.54334	132.92528	393	178.25182	493	223.22017	593	268.90331	693	314.33955	793	359.69880	893	409.50304	993	450.41728
94	42.63769	294	87.99693	133.44899	394	178.71542	494	224.0766	594	269.43390	694	314.79314	794	359.82087	894	409.51163	994	450.57078
95	43.09128	295	88.45052	133.80977	395	179.16901	495	224.52825	595	269.88749	695	315.24674	795	360.60598	895	409.96322	995	451.32447
96	43.54487	296	88.90412	134.26336	396	179.62260	496	224.98184	596	270.34109	696	315.10333	796	361.05957	896	409.77006	996	451.77006
97	43.98871	297	89.35771	134.71695	397	180.07169	497	225.33587	597	270.75468	697	316.15392	797	361.51316	897	409.11882	997	452.33536
98	44.42926	298	89.81130	135.20704	398	180.52979	498	225.88903	598	271.24827	698	316.60751	798	361.96676	898	409.32600	998	452.68524
99	44.90565	299	90.26489	135.62414	399	180.98338	499	226.34262	599	271.70186	699	317.06111	799	362.42035	999	407.79595	999	453.13884

MASS—KILOGRAMS TO AVOIRDUPOIS POUNDS

[Reduction factor: 1 kilogram = 2.204622341 avoirdupois pounds]

		Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds
0	1	220	4622	200	440.9245	300	661.3867	400	881.8489	500	1,102.3112	600	1,322.7734
1	2	2,2046	4,4092	1	440.1291	1	663.5913	2	884.0536	2	1,104.1553	1	1,324.9750
2	3	222.6669	445.3337	2	445.3337	3	665.0036	4	886.2882	5	1,106.2104	1	1,327.1826
4	5	6,6139	12,8715	2	227.0761	3	447.5383	4	890.6674	5	1,111.1297	4	1,331.5919
7	9	229.2807	449.7430	4	229.2807	5	449.7430	6	892.8720	7	1,113.3343	5	1,333.7965
11	15	1,0231	2,0464	5	231.4853	5	451.9476	6	895.0767	7	1,115.5289	6	1,336.0011
15	23	6,236.9900	12,4924	6	15.4824	7	456.3568	7	897.2813	8	1,117.7435	7	1,338.2058
17	28	235.8946	478.1891	8	238.0992	9	676.3191	9	899.4559	8	1,119.9481	9	1,340.4104
18	37	17.6370	340.0338	9	460.7661	9	681.2283	9	901.6905	9	1,122.1528	9	1,342.6150
19	84	16.16	340.0338	9	460.7661	9	681.2283	9	901.6905	9	1,122.1528	9	1,342.6150
10	22	242.5085	485.0169	210	462.9707	310	683.4329	410	903.8952	510	1,124.3574	610	1,344.8196
11	24	258.06	516.1731	1	465.1753	1	685.6375	2	906.0998	1	1,126.5620	1	1,347.0243
12	26	455.355	917.7177	2	467.3199	2	687.8422	3	908.3044	2	1,128.7666	2	1,349.2289
13	28	660.01	1,222.2223	3	469.5846	3	690.0468	3	910.5090	3	1,130.9713	3	1,351.3335
14	30	8647	1,521.3269	4	471.7892	4	692.2514	4	912.7136	4	1,133.1759	4	1,353.4381
15	33	6,0693	12,1316	5	253.5316	5	473.9938	5	694.4560	5	914.9183	5	1,135.3805
16	35	255.7362	511.4761	6	476.1984	6	696.6607	6	917.1229	6	1,137.5851	6	1,358.4474
17	37	478.86	940.9408	7	257.9408	7	698.8653	7	919.3275	7	1,139.7898	7	1,360.2520
18	39	6832	1,454.2623	8	480.6077	8	701.0699	8	921.5221	8	1,141.9944	8	1,362.5566
19	41	8878	1,8123	9	482.8123	9	703.2745	9	923.7668	9	1,144.1990	9	1,364.6612
20	44	9924	120	264.5547	220	705.4791	420	925.9414	520	1,146.4036	620	1,366.8659	
21	46	3971	766.7583	221	487.2215	221	707.6082	221	928.1460	521	1,148.5682	621	1,369.5679
22	48	5017	1,069.9639	222	489.4262	222	709.8884	222	930.3506	522	1,150.8129	622	1,371.2751
23	50	7063	1,685.3732	223	491.6384	223	712.0980	223	932.5553	523	1,153.0173	623	1,373.4797
24	52	9109	2,046.4	224	493.8354	224	714.9767	224	934.7599	524	1,155.2221	624	1,375.6843
25	55	11,56	2,775.5778	225	496.0440	5	716.5023	5	936.9645	5	1,157.4267	5	1,377.8890
26	57	3,3202	5,277.7824	6	498.2446	6	718.7069	6	939.1691	6	1,159.6314	6	1,380.0936
27	59	5248	7,279.9870	7	500.4493	7	720.9115	7	941.3237	7	1,161.8326	7	1,382.2982
28	61	7294	9,282.1917	8	502.6539	8	723.1161	8	943.5784	8	1,164.9496	8	1,384.4038
29	63	3440	9,3963	9	504.8385	9	725.3208	9	945.7530	9	1,166.2452	9	1,386.5075
30	66	1,1387	130	286.6009	230	507.0631	230	727.5254	430	947.9876	530	1,168.4498	
31	68	3433	288.8055	231	509.2678	231	731.7300	231	950.1922	531	1,170.6545	630	1,388.9121
32	70	5479	291.0101	2	511.4274	2	731.9346	2	952.3926	3	1,172.8591	532	1,391.7323
33	72	7525	293.2148	3	513.6770	3	734.1392	3	954.6015	3	1,175.0637	3	1,395.5229
34	74	295.4194	4	515.8816	4	735.3459	4	956.8061	5	1,177.2683	4	1,397.7306	
35	77	297.6240	5	518.0863	5	738.5485	5	959.0107	5	1,179.4730	5	1,399.9352	
36	79	3664	6	520.2909	6	740.7531	6	961.2153	6	1,181.6776	6	1,401.3344	
37	81	5710	7	522.4955	7	742.9577	7	963.4200	7	1,183.8822	7	1,406.5491	
38	83	7755	8	524.7001	8	745.1624	8	965.6246	8	1,186.0868	8	1,408.7537	
39	85	9803	9	526.9047	9	747.3670	9	967.8392	9	1,188.2314	9	1,408.7537	
40	88	1,189	140	308.6471	240	529.1094	440	970.5716	540	1,190.4961	640	1,410.9583	
41	90	3895	1	531.3140	1	751.7762	1	972.2835	1	1,192.7053	1	1,415.4431	
42	92	5941	2	533.5064	2	753.9808	2	974.4371	2	1,194.6053	2	1,415.5675	
43	94	7958	3	515.2610	3	735.7732	3	976.1855	3	1,197.1099	3	1,417.5722	
44	97	9034	4	317.4656	4	537.9279	4	978.8523	4	1,199.3146	4	1,419.7678	
45	99	2080	5	319.6702	5	601.0569	5	981.2013	5	1,201.2152	5	1,421.8184	
46	101	4126	6	321.8749	6	642.3371	6	983.2616	6	1,203.7238	6	1,424.8860	
47	103	6173	7	324.0795	7	644.5417	7	985.4662	7	1,205.5284	7	1,426.3907	
48	105	8219	8	326.2841	8	676.2085	8	987.6708	8	1,208.1330	8	1,428.5933	
49	108	2055	9	328.4887	9	699.4132	9	989.8754	9	1,210.3377	9	1,430.7999	

0	1	220	4622	200	440.9245	300	661.3867	400	881.8489	500	1,102.3112	600	1,322.7734
1	2	222	4669	224	445.3337	2	665.0036	1	884.0536	2	1,104.1553	1	1,324.9750
2	3	227	48715	2	447.5383	3	668.0036	2	888.2882	3	1,106.2104	2	1,327.1826
3	4	229	2807	4	449.7430	4	670.2052	3	890.6674	4	1,111.1297	3	1,331.5919
4	5	231	4853	5	451.9476	5	672.4098	5	892.8720	5	1,113.3343	5	1,333.7965
5	6	233	6900	6	454.1522	6	674.6114	6	895.0767	6	1,115.5289	6	1,336.0011
6	7	235	8946	7	456.3568	7	676.8191	7	897.2813	7	1,117.7435	7	1,338.2058
7	8	238	0992	8	458.5614	8	679.0237	8	899.4559	8	1,119.9481	8	1,340.4104
8	9	240	0388	9	460.7661	9	681.2283	9	901.6905	9	1,122.1528	9	1,342.6150
9	10	242	5085	210	462.9707	310	683.4329	410	903.8952	510	1,124.3574	610	1,344.8196
10	11	244	1731	1	465.1753	1	685.6375	2	906.0998	1	1,126.5620	1	1,347.0243
11	12	246	9177	2	467.3199	2	687.8422	3	908.3044	2	1,128.7666	2	1,349.2289
12	13	249	1223	3	469.5846	3	690.0468	3	910.5090	3	1,130.9713	3	1,351.3335
13	14	251	3269	4	471.7892	4	692.2514	4	912.7136	4	1,133.1759	4	1,353.4381
14	15	253	5316	5	473.9938	5	694.4560	5	914.9183	5	1,135.3805	5	1,355.8427
15	16	255	7362	6	476.1984	6	696.6607	6	917.1229	6	1,137.5851	6	1,358.0474
16	17	257	9408	7	478.4030	7	698.8653	7	919.3275	7	1,139.7898	7	1,360.2520
17	18	259	1408	8	480.6077	8	701.0699	8	921.5221	8	1,141.9944	8	1,362.5566
18	19	262	3501	9	482.8123	9	703.2745	9	923.7668	9	1,144.1990	9	1,364.6612
19	20	264	5547	220	487.2215	320	705.4791	420	925.9414	520	1,146.4036	620	1,366.8659
20	21	266	7583	221	487.2215	221	707.6082	221	928.1460	521	1,148.5682	621	1,369.5679
21	22	268	9639	222	489.4262	222	709.8884	222	930.3506	522	1,150.8129	622	1,371.2751
22	23	271	1685	223	491.6384	223	712.0980	223	932.5553	523	1,153.0173	623	1,373.4797
23	24	273	3732	224	493.8354	224	714.9767	224	934.7599	524	1,155.2221	624	1,375.6843
24	25	275	5778	225	496.0440	225	716.5023	225	936.9645	525	1,157.4267	625	1,377.8890
25	26	277	7824	226	498.2446	226	718.7069	226	939.1691	526	1,159.6314	626	1,380.0936
26	27	279	9870	227	500.4493	227	720.9115	227	941.3237	527	1,161.8326	627	1,382.2982
27	28	281	1917	228	502.6539	228	723.1161	228	943.5784	528	1,164.9496	628	1,384.4038
28	29	284	3963	229	504.8385	229	725.3208	229	945.7530	529	1,166.2452	629	1,386.0755
29	30	286	6009	230	507.0631	230	727.5254	230	947.9876	530	1,168.4498	630	1,388.9121
30	31	288	8055	231	509.2678	231	731.7300	231	950.1922	531	1,170.6545	631	1,397.7323
31	32	291	101	2	511.4274	2	731.9346	2	952.3926	3	1,172.8591	3	1,393.3213
32	33	293	2148	3	513.6770	3	734.1392	3	954.6015	3	1,175.0637	3	1,395.5229
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Units of Weight and Measure—Definitions and Tables of Equivalents

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50	110.2311	330.6934	250	551.1556	771.6178	450	902.0801	550	1.212.5423	650	1.433.0045	750	1.653.4668	850	1.873.9290	950	2.094.3912
1	112.4357	332.8980	1	553.3602	773.8224	1	904.2847	1	1.214.7469	1	1.435.2091	1	1.655.6714	1	1.876.1336	1	2.096.5958
2	114.6104	335.1026	2	555.3548	776.0271	2	906.4893	2	1.216.9515	2	1.437.4138	2	1.657.8760	2	1.878.3382	2	2.098.8005
3	116.8150	337.3072	3	557.7695	778.1562	3	906.6939	3	1.217.1662	3	1.439.1894	3	1.660.0806	3	1.880.5429	3	2.101.0631
4	119.0456	341.5118	4	559.9741	780.4363	4	1.000.8985	4	1.221.3602	4	1.441.2230	4	1.662.2552	4	1.882.4745	4	2.103.2097
5	121.2542	343.7165	5	562.1787	782.6406	5	1.003.1032	5	1.223.5654	5	1.444.0276	5	1.664.4899	5	1.884.9521	5	2.105.4143
6	123.4589	345.9211	6	564.3833	784.8456	6	1.005.3078	6	1.225.7500	6	1.446.2323	6	1.666.6945	6	1.887.1567	6	2.107.6190
7	125.6635	346.1257	7	566.5879	787.0502	7	1.007.5124	7	1.227.9746	7	1.448.4369	7	1.668.8991	7	1.889.3613	7	2.109.8236
8	127.8681	348.3303	9	568.7926	789.2558	8	1.009.7170	8	1.230.1993	8	1.450.4415	8	1.671.1037	8	1.891.5660	8	2.112.0282
9	130.0727	350.5330	9	570.9972	791.4594	9	1.012.9271	9	1.232.3839	9	1.452.6461	9	1.673.3084	9	1.893.7706	9	2.114.2328
10	132.3773	352.7396	260	573.2018	793.6640	460	1.014.1263	560	1.234.5885	660	1.455.0507	760	1.675.5130	860	1.895.0752	960	2.116.4374
11	134.4826	354.9442	270	575.4064	795.8887	1	1.016.3309	1	1.236.7931	1	1.457.5554	1	1.677.7176	1	1.898.798	1	2.118.6421
12	136.6866	357.1488	2	577.6111	798.0733	2	1.018.5308	2	1.238.9978	2	1.459.6600	2	1.679.9222	2	1.900.3845	2	2.120.8467
13	138.8812	359.3534	3	579.8157	800.2729	3	1.020.7401	3	1.241.2024	3	1.461.6616	3	1.682.1268	3	1.902.5891	3	2.123.0513
14	141.0958	361.5581	4	582.0203	802.4829	4	1.022.9448	4	1.243.4070	4	1.463.8692	4	1.684.3315	4	1.904.7937	4	2.125.2559
15	143.3005	363.7627	5	584.2249	804.6872	5	1.025.1494	5	1.245.6116	5	1.466.7539	5	1.686.5861	5	1.906.9963	5	2.127.4606
16	145.5051	365.9673	6	586.4295	806.8918	6	1.028.2750	6	1.247.8162	6	1.468.2785	6	1.688.7097	6	1.909.4029	6	2.129.6652
17	147.7097	368.1719	7	588.6342	809.0964	7	1.029.5586	7	1.250.0209	7	1.470.4831	7	1.690.9453	7	1.911.4076	7	2.131.6698
18	149.9143	370.3766	8	590.8388	811.3056	8	1.030.7633	8	1.252.2255	8	1.472.6877	8	1.693.1500	8	1.913.6122	8	2.134.0744
19	152.1189	372.5812	9	593.0434	813.3929	9	1.033.9679	9	1.254.4301	9	1.474.8923	9	1.695.3346	9	1.915.8168	9	2.136.2790
20	154.3236	374.7858	270	595.2480	815.7013	370	1.036.1725	570	1.256.6347	670	1.477.0970	770	1.697.5592	870	1.918.0214	970	2.138.4837
21	156.5282	376.9904	1	597.4527	817.9449	1	1.038.7711	1	1.258.8994	1	1.479.3016	1	1.699.7338	1	1.920.2261	1	2.140.6883
22	158.7324	379.1950	2	599.6573	820.1950	2	1.040.3817	2	1.261.0404	2	1.481.3062	2	1.701.9884	2	1.922.3037	2	2.142.8929
23	160.9374	381.3997	3	601.8619	822.3241	3	1.042.8764	3	1.263.2486	3	1.483.7108	3	1.704.1731	3	1.924.3633	3	2.145.307
24	163.1421	383.6043	4	604.0665	824.5528	4	1.044.9910	4	1.265.4532	4	1.485.1955	4	1.705.3777	4	1.926.3399	4	2.147.3022
25	165.3467	385.8085	5	606.2711	826.7334	5	1.047.9956	5	1.267.6578	5	1.488.1201	5	1.708.5223	5	1.929.0445	5	2.149.5068
26	167.5113	388.0135	6	608.4758	828.9380	6	1.049.4002	6	1.269.8225	6	1.490.2247	6	1.710.7669	6	1.931.2492	6	2.151.7114
27	169.7559	390.2182	7	610.6804	831.1266	7	1.051.6049	7	1.272.0871	7	1.492.2333	7	1.712.9916	7	1.932.5598	7	2.153.9160
28	171.9855	392.4228	8	612.8850	833.3472	8	1.053.8095	8	1.274.2717	8	1.494.1339	8	1.715.1962	8	1.935.5884	8	2.155.1206
29	174.1652	394.6274	9	615.0896	835.5519	9	1.056.0141	9	1.276.4763	9	1.496.9386	9	1.717.4008	9	1.937.6830	9	2.156.3233
30	176.3698	396.8320	280	617.2943	839.5650	480	1.058.2187	580	1.278.6810	680	1.499.1432	780	1.719.6054	880	1.940.0677	980	2.156.5299
31	178.5444	399.0366	1	619.4989	839.9611	1	1.060.6233	1	1.280.8856	1	1.501.3478	1	1.721.8100	1	1.942.2723	1	2.162.7345
32	180.7290	401.2413	2	621.7035	842.1657	2	1.062.2920	2	1.283.0924	2	1.503.5524	2	1.724.0147	2	1.944.4769	2	2.164.9391
33	182.9327	403.4459	3	623.9081	844.3074	3	1.064.3326	3	1.285.2948	3	1.505.5571	3	1.726.2193	3	1.946.8185	3	2.167.4438
34	185.1853	405.6505	4	626.1127	846.5750	4	1.067.0372	4	1.287.4997	4	1.507.9617	4	1.728.4239	4	1.948.8861	4	2.169.3484
35	187.3929	407.8551	5	628.3174	848.7796	5	1.069.2418	5	1.289.7041	5	1.510.1663	5	1.730.6285	5	1.951.9098	5	2.171.5530
36	189.5975	410.0598	6	630.5220	850.8432	6	1.071.4465	6	1.291.9087	6	1.512.3709	6	1.732.8332	6	1.953.9544	6	2.173.7576
37	191.8021	412.2644	7	632.7262	853.1888	7	1.073.4511	7	1.294.1133	7	1.514.5755	7	1.735.0378	7	1.955.5000	7	2.175.9623
38	194.0068	414.4690	8	634.9312	855.3935	8	1.075.5557	8	1.296.3179	8	1.516.7802	8	1.737.2424	8	1.957.046	8	2.178.1669
39	196.2114	416.6736	9	637.1359	857.5981	9	1.078.0603	9	1.298.5226	9	1.518.9848	9	1.739.4470	9	1.959.9093	9	2.180.3715
40	198.4160	418.8782	290	639.3405	859.8027	490	1.080.2649	590	1.300.7272	690	1.521.1894	790	1.741.6516	790	1.962.1139	990	2.182.5761
41	200.6206	421.0829	1	641.5451	862.0072	1	1.082.4696	1	1.302.9818	1	1.523.9940	1	1.743.8363	1	1.964.3185	1	2.184.5701
42	202.8253	423.2875	2	643.7497	864.2120	2	1.084.6712	2	1.305.1364	2	1.525.9987	2	1.746.0609	2	1.966.5231	2	2.186.9834
43	205.0299	425.4921	3	645.9543	866.4466	3	1.086.7788	3	1.307.3410	3	1.527.0033	3	1.748.2655	3	1.968.7278	3	2.189.1900
44	207.2345	427.6967	4	648.1590	868.6212	4	1.088.0834	4	1.309.5457	4	1.530.0079	4	1.750.4701	4	1.970.9324	4	2.191.3946
45	209.4391	429.9014	5	650.3636	870.8258	5	1.091.2881	5	1.311.7603	5	1.532.2125	5	1.752.6748	5	1.973.1370	5	2.193.5992
46	211.6437	432.1060	6	652.5682	873.0304	6	1.093.4927	6	1.313.9449	6	1.534.1171	6	1.754.8794	6	1.975.3416	6	2.195.8039
47	213.8484	434.3106	7	654.7723	875.2351	7	1.095.6973	7	1.316.1959	7	1.536.2118	7	1.757.0840	7	1.977.5462	7	2.198.0895
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49	218.2376	438.7198	9	659.1821	879.6443	9	1.100.1055	9	1.320.5588	9	1.541.0310	9	1.761.4933	9	1.981.5355	9	2.202.4177

• X. STATUS OF THE INTERNATIONAL METRIC SYSTEM IN THE UNITED STATES

"The Congress shall have power to * * * fix the standard of weights and measures." (Constitution of the United States.)

THE 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, 1866.)

THE 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, in accordance with the act of July 28, 1866." (Order approved by the Secretary of the Treasury, Apr. 5, 1893.)

FOREIGN POSTAL RATES BASED ON METRIC WEIGHTS

"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.)

METRIC WEIGHTS USED IN THE COINAGE

"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.)

CONGRESS PROVIDES METRIC STANDARDS FOR THE STATES OF THE UNION

"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.)

UNITED STATES JOINS IN ESTABLISHING INTERNATIONAL BUREAU

"The high contracting parties engage to establish and maintain, at their common expense, a scientific and permanent international bureau⁵ of weights

⁵ 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 all the principal governments of the world.

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.)

CONGRESS ADOPTS THE METRIC UNITS FOR ELECTRICAL MEASURES

It was enacted by the Senate and House of Representatives that the international electrical units based on the metric system "shall be the legal units of electrical measure in the United States." (Revised Statutes of the United States, Supplement, vol. 2, chap. 131, 1894.)

METRIC SYSTEM REQUIRED IN THE MEDICAL WORK OF THE NAVY DEPARTMENT

"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, Apr. 15, 1878.)

METRIC SYSTEM REQUIRED IN MEDICAL WORK OF WAR DEPARTMENT

"All requisitions, invoices, receipts and returns, pertaining to medical supplies will be in accordance with the metric system of weights and measures. After the 30th day of June, 1894, the use of this system in writing official prescriptions is desired; on and after the 1st day of January, 1895, such use is hereby ordered." (Order approved by Secretary of War Apr. 13, 1894.)

METRIC SYSTEM RECOGNIZED AND ESTABLISHED IN PORTO RICO

"The metric system of weights and measures * * * is recognized and established in Porto Rico for use in all industrial and commercial transactions." (Acts, 1913, legislative assembly.)

METRIC SYSTEM MADE THE LEGAL SYSTEM IN THE PHILIPPINE ISLANDS

"The metrical system of weights and measures as authorized by sections 3569 and 3570 of the Revised Statutes of the United States and at present in use in the Philippine Islands shall be continued." (Philippine tariff, rev. law, 1909; Stat. L., vol. 36, pt. 1, ch. 8, sec. 9, p. 137.)

METRIC SYSTEM REQUIRED IN UNITED STATES PUBLIC HEALTH SERVICE

"Officers shall, for all official, medical, and pharmacal purposes, make use of the metric system of weights and measures. In expressing quantities by weight the terms of 'gram' and 'centigram,' and in expressing quantity by measure the term 'cubic-centimeter,' only shall be employed." (Regulation promulgated by the President Nov. 21, 1902.)

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