



**PREFERRED
METRIC UNITS
FOR GENERAL USE
BY THE
FEDERAL
GOVERNMENT**

LC 1098
November 1978

This Letter Circular comprises a list of Preferred Metric Units for Use by the Federal Government that was developed by the Metric Practice and Preferred Units Division of the Operating Committee of the Interagency Committee on Metric Policy.

The National Bureau of Standards is pleased to make this list available to promote consistency and uniformity of the use of the metric system by all agencies of the Federal Government. Comments and suggestions should be sent to J.V. Odom, Director of the Metric Practice and Preferred Units Division, c/o National Bureau of Standards, Washington, D.C. 20234.

1954

1955



September 15, 1978

Adopted September 13, 1978
Metric Practice and Preferred Units Division
Operating Committee
Interagency Committee on Metric Policy

PREFERRED METRIC UNITS
FOR GENERAL USE BY THE FEDERAL GOVERNMENT

Foreword

The following Table lists preferred metric units (SI units and units accepted for use with SI) recommended for use throughout the Federal Government. Some Government agencies will develop supplemental lists applicable to their special fields. Such supplemental lists may, if desired by the preparing Agency, include all listings in this Table.

This Table is consistent with American National Standard Z210.1-1976 (ASTM E 380-76, IEEE 268-1976), in which conversion factors to SI units only are listed; SI units are the coherent set of base, supplementary, and derived units without prefixes, except for the base unit kilogram. In this table, conversion factors to the appropriate sized metric unit (SI unit with prefix as needed or non-SI unit accepted for use with SI) are listed.

A. Arrangement. The listings are in the same order as in ISO Standard 1000. The index following the Table is in alphabetical order and includes listings of quantities (Col. 2 of Table), inch-pound units (Col. 3), and metric units (Col. 4). Some of the listings in Column 3 of the Table (inch-pound units) are metric units that are now in common use.

B. Rates and Other Derived Quantities. It is not practical to list all quantities but others such as rates can be readily derived. For example, to convert from in/s to cm/s multiply by 2.54; to convert from Btu/lb to J/kg multiply by 1.055 056/0.453 592 37 or 2.326 000.

C. Conversion Factors. Conversion factors are shown from inch-pound values to metric values, generally to seven significant digits.

Exact conversion factors are indicated by an asterisk (*).

For conversion from metric values to inch-pound values, divide rather than multiply by the factor. For example, to convert 16.3 meters to yards divide by 0.9144; the answer is 17.826 yards, which rounds to 17.8 yards.

D. Rounding. The following guidance on rounding is quoted from the ANMC Metric Editorial Guide, third edition, and is applicable to converting to inch-pound values as well as to metric values: For everyday rounding of metric values obtained by converting untoleranced inch-pound values, the following simplified rules are suggested, but for more sophisticated rounding rules, see ANSI/Z210.1-1976, Section 4.

(a) If the inch-pound value is expressed by a combination of units such as feet and inches, or pounds and ounces, first express it in terms of the smaller unit.

Example: 14 ft 5 in = 173 in

(b) When the digits to be discarded begin with a 5 or more, increase by one unit the last digit retained.

Example: 8.3745, if rounded to three digits, would be 8.37; if rounded to four digits, 8.375

(c) Multiply the inch-pound value by the conversion factor. If the first significant* digit of the metric value is equal to or larger than the first significant digit of the inch-pound value, round the metric value to the same number of significant digits as there are in the inch-pound value.

Example: $11 \text{ mi} \times 1.609 \text{ km/mi} = 17.699 \text{ km}$
which rounds to 18 km

$61 \text{ mi} \times 1.609 \text{ km/mi} = 98.149 \text{ km}$
which rounds to 98 km

If smaller, round to one more significant digit.

Examples: $66 \text{ mi} \times 1.609 \text{ km/mi} = 106.194 \text{ km}$
which rounds to 106 km

$8 \text{ ft} \times 0.3048 \text{ m/ft} = 2.4384 \text{ m}$
which rounds to 2.4 m

* One or more zeroes at the beginning of a number are not called "significant." Zeroes at the end of a number are not considered significant unless their use results in a number that is closer to the true value than would be the case if the number were increased or decreased by 1.

(d) Exceptions: It is sometimes better to round to one less digit than specified above. For example, according to Rule (c), 26 pounds per square inch air pressure in an automobile tire would be converted as follows:

$26 \text{ psi}^{**} \times 6.895 \text{ kPa/psi} = 179.27 \text{ kPa}$
which rounds to 179 kPa

but 180 kPa, where the zero is not a significant digit, would usually be better because tire pressures are not expected to be very precise.

The rules do not apply to conversion of $^{\circ}\text{F}$ to $^{\circ}\text{C}$.

(e) The simplified rules given above do not eliminate the necessity for using good judgment. If you believe that a dimension given as 8 ft is valid to the nearest 1/10 inch, you should consider it to mean 96.0 inches [per (a)] and treat it as having 3 significant digits. The rounded dimension would then be 2.438 m instead of 2.4 m.

** Abbreviation for pounds-force per square inch (lbf/in^2).

Where an inch-pound value represents a maximum or minimum limit that must be respected, the rounding must be in the direction that does not violate the original limit.

E. Notes. In the following Table reference is made to these notes. Note identification is shown in parenthesis in last column.

(a) In these expressions °C indicates temperature intervals. Therefore °C may be replaced with K if desired without changing the value or affecting the conversion factor. For example, in item 4-7.1 thermal conductivity, $1 \text{ W}/(\text{m}\cdot^{\circ}\text{C}) = 1 \text{ W}/(\text{m}\cdot\text{K})$.

(b) Not to be confused with kcal. The unit, kcal, is often called Calorie, with capital C as its symbol, especially in nutrition.

(c) If you wish to convert fuel efficiency (mi/gal) to fuel consumption (L/100 km), use the formula

$$235.215 \div (\text{mi}/\text{gal}) = \text{L}/100 \text{ km}$$

(d) In surveying and cartography, use is made of the U.S. survey mile (usually called the U.S. statute mile), based on the U.S. survey foot which is longer than the international foot by two parts per million. The factors used in this Table for survey mile, acre, acre foot, and square survey mile are based on the U.S. survey foot. Factors for all other old length, area, and volume values are based on the international foot.

(e) Use of the degree and its decimal submultiples is permissible when the radian is not a convenient unit. Use of the minute and second is discouraged except for special fields such as cartography.

(f) The nautical mile (nmi) equals 1852 meters exactly. The knot is equal to one nautical mile per hour.

(g) These listed equivalences between metric and inch-pound kitchen measures are based on a metric cup of 250 mL, a metric tablespoon of 15 mL, and a metric teaspoon of 5 mL.

(h) "Weight" is the common non-technical term for "mass."

PREFERRED METRIC UNITS
FOR GENERAL USE BY THE FEDERAL GOVERNMENT

<u>ISO</u>	<u>Quantity</u>	<u>From Inch-Pound Units</u>	<u>To Metric Units</u>	<u>Multiply By</u>
1. <u>Space and time</u>				
1-1.1	plane angle	rad	rad	*1.0
		° (degree)	rad	0.017 453 29
		° (degree)	°	*1.0 (e)
		' (minute)	'	*1.0 (e)
		" (second)	"	*1.0 (e)
1-2.1	solid angle	sr	sr	*1.0
1-3.1	length	mmi	mmi	*1.0 (f)
		mi (survey)	km	1.609 347 (d)
		mi (int)	km	*1.609 344 (d)
		fathom	m	*1.828 8
		yd	m	*0.914 4
		ft (survey)	m	0.304 800 6 (d)
		ft (int)	m	*0.304 8 (d)
		in	cm	*2.54
		in	mm	*25.4

(cont. p.5)

<u>ISO</u>	<u>Quantity</u>	<u>From</u> <u>Inch-Pound Units</u>	<u>To</u> <u>Metric Units</u>	<u>Multiply By</u>
1-3.1 (cont.)	length (cont.)	mil	μm	*25.4
		micron	μm	*1.0
		μin	μm	*0.025 4
		A°	mm	*0.1
1-3.1a	fuel efficiency	mi/gal	km/L	0.415 143 7 (c)
1-4.1	area	mi^2 (survey)	km^2	2.589 998 (d)
		acre	ha	0.404 687 3 (d)
		acre	m^2	4 046.873 (d)
		yd^2	m^2	0.836 127 4
		ft^2	m^2	*0.092 903 04
		in^2	cm^2	*6.451 6
		in^2	mm^2	*645.16
		circular mil	μm^2	506.707 5
1-5.1	volume	acre foot	dam^3	1.233 489 (d)
		yd^3	m^3	0.764 554 9
		bb1(oil)(42 gallons)	m^3	0.158 987 3
		ft^3	m^3	0.028 316 85
		ft^3	L	28.316 85
		board foot	m^3	0.002 359 737
		(cont p. 6)		

<u>ISO</u>	<u>Quantity</u>	<u>From</u> <u>Inch-Pound Units</u>	<u>To</u> <u>Metric Units</u>	<u>Multiply By</u>
1-5.1 (cont.)	Volume (cont.)			
		bushel	L	35.239 07
		peck	L	8.809 768
		gallon (liq)	L	3.785 412
		quart (liq)	L	0.946 352 9
		pint (liq)	L	0.473 176 5
		fl oz	mL	29.573 53
		in ³	cm ³	16.387 06
		cup	mL	236.588 2
		cup	metric cup	1. (g)
		tablespoon	mL	14.786 76
		tablespoon	metric tablespoon	1.0 (g)
		teaspoon	mL	4.928 922
		teaspoon	metric teaspoon	1.0 (g)

1-6.1	time	d	d	*1.0
		h	h	*1.0
		min	min	*1.0
		s	s	*1.0

1-8.1	angular velocity	rad/s	rad/s	*1.0
-------	------------------	-------	-------	------

<u>ISO</u>	<u>Quantity</u>	<u>From</u> <u>Inch-Pound Units</u>	<u>To</u> <u>Metric Units</u>	<u>Multiply By</u>
1-10.1	velocity	knot mi/h ft/s	knot km/h m/s	*1.0 (f) *1.609 344 *0.304 8
1-11.1	acceleration	ft/s ²	m/s ²	*0.304 8

2. Periodic and related phenomena

2-3.1	frequency	c/s	Hz	*1.0
2-3.2	rotational frequency	r/s (formerly rps) r/min (formerly rpm)	r/s r/min	*1.0 *1.0

3. Mechanics

3-1.1	mass (weight)	ton (long) ton (short) slug lb (avdp) oz (troy) oz (avdp) grain	t (metric ton) t (metric ton) kg kg g g mg	1.016 047 (h) *0.907 184 74 (h) 14.593 90 (h) *0.453 592 37 (h) 31.103 48 (h) 28.349 52 (h) *64.798 91 (h)
-------	---------------	---	--	--

<u>ISO</u>	<u>Quantity</u>	<u>From</u> <u>Inch-Pound Units</u>	<u>To</u> <u>Metric Units</u>	<u>Multiply</u> <u>By</u>
3-1.1a	moment of mass	lb·ft	kg·m	0.138 254 9
3-2.1	density	ton(short)/yd ³ lb/ft ³	t/m ³ kg/m ³	1.186 553 16.018 46
3-5.1	momentum	lb·ft/s	kg·m/s	0.138 255 0
3-6.1	angular momentum	lb·ft ² /s	kg·m ² /s	0.042 140 09
3-7.1	moment of inertia	lb·ft ²	kg·m ²	0.042 140 09
3-8.1	force	kip lbf poundal	kN N N	4.448 222 4.448 222 0.138 255 0
3-10.1	moment of force, torque	lbf·ft lbf·in	N·m N·m	1.355 818 0.112 984 8
3-11.1	pressure	atm (std) bar lbf/in ² inHg	kPa kPa kPa kPa	*101.325 *100.00 6.894 757 3.38

<u>ISO</u>	<u>Quantity</u>	<u>From</u> <u>Inch-Pound Units</u>	<u>To</u> <u>Metric Units</u>	<u>Multiply By</u>
3-11.1 (cont.)	pressure (cont.)	ftH ₂ O	kPa	2.99
		inH ₂ O	kPa	0.249
		mmHg	kPa	0.133
		mbar	kPa	*0.1
3-11.2	stress	kip/in ² (formerly ksi)	GPa	0.006 894 757
		lbf/in ² (formerly psi)	MPa	0.006 894 757
		lbf/in ² (formerly psi)	kPa	6.894 ⁷⁵⁷ 575
		lbf/ft ²	kPa	0.047 880 26
3-19.1	viscosity (dynamic)	cP (centipoise)	mPa·s	*1.0
3-20.1	viscosity (kinematic)	cSt (centistokes)	mm ² /s	*1.0
3-21.1	surface tension	lbf/ft	N/m	14.593 90
3-22.1	energy, work	kWh	MJ	*3.6
		cal _{th}	J	*4.184 (b)
		Btu _{IT}	kJ	1.055 056
		ft·lbf	J	1.355 818

<u>ISO</u>	<u>Quantity</u>	<u>From</u> <u>Inch-Pound Units</u>	<u>To</u> <u>Metric Units</u>	<u>Multiply By</u>
3-23.1	power	ton (refrigeration) Btu _{IT} /s hp(550 ft·lbf/s) hp (electric) Btu _{IT} /h	kW kW kW kW W	3.516 800 1.055 056 0.745 699 9 *0.746 0.293 071 1
4. <u>Heat</u>				
4-1.1	thermodynamic temperature	°F	K	*T _K = (t _{°F} + 459.67)/1.8
4-2.1	Celsius temperature	°F	°C	*t _{°C} = (t _{°F} - 32)/1.8
4-1.1a	temperature interval	°F	K	*1/1.8 (a)
4-2.1a	temperature interval	°F	°C	*1/1.8 (a)
4-3.1	linear expansion coefficient	°F ⁻¹	K ⁻¹ or °C ⁻¹	*1.8 (a)
4-4.1	heat, quantity of heat			See 3-22.1

ISO Quantity Inch-Pound Units To Metric Units Multiply By

4-5.1 heat flow rate See 3-23.1

4-7.1 thermal conductivity Btu·in/(ft²·h·°F) W/(m·°C) 0.144 228 (a)

4-8.1 coefficient of heat transfer Btu/(ft²·h·°F) W/(m²·°C) 5.678 26 (a)

4-10.1 heat capacity Btu/°F kJ/°C 1.899 108 (a)

4-11.1 specific heat capacity Btu/(lb·°F) kJ/(kg·°C) *4.186 8

4-13.1 entropy Btu/°F kJ/K 1.899 108

4-14.1 specific entropy Btu/(lb·°F) kJ/(kg·K) *4.186 8

4-16.1 specific energy Btu_{IT}/lb kJ/kg *2.326

5. Electricity and Magnetism (any suitable prefix) (i)

5-1.1 electric current A A *1.0

5-2.1 electric charge C C *1.0
Ah C *3600.0

<u>ISO</u>	<u>Quantity</u>	<u>From</u> <u>Inch-Pound Units</u>	<u>To</u> <u>Metric Units</u>	<u>Multiply By</u>
5-6.1	electric potential, V potential difference, electromotive force		V	*1.0
5-11.1	capacitance	F	F	*1.0
5-21.1	magnetic field strength	oersted	A/m	79.577 47
5-24.1	magnetic flux density	gauss	μT	*100.0
5-25.1	magnetic flux	maxwell	nWb	*10.0
5-27.1	inductance	H	H	*1.0
5-41.1	electric resistance	Ω	Ω	*1.0
5-42.1	conductance	mho	S	*1.0
5-43.1	resistivity	ohm circular mil per foot	$\text{n}\Omega\cdot\text{m}$	1.662 426
5-44.1	conductivity	mho/cm	S /m	*100.0

<u>ISO</u>	<u>Quantity</u>	<u>From</u> <u>Inch-Pound Units</u>	<u>To</u> <u>Metric Units</u>	<u>Multiply By</u>
6-24.1	illuminance	fc	lx	10.763 91
6-50.1	activity (of a radionuclide)	curie (Ci)	MBq	*37 000.
6-51.1	absorbed dose	rad	Gy (gray)	*0.01
6-52.1	dose equivalent	rem	Sv (sievert)	*0.01
6-53.1	exposure (x- and gamma rays)	roentgen (R)	C/kg	0.000 258

* Denotes exact conversion factor

Alphabetical Index for Quantities, Units, and Notes

absorbed dose	6-51.1	candle per square inch	6-22.1
acceleration	1-11.1	candlepower	6-19.1
acre	1-4.1	capacitance	5-11.1
acre foot	1-5.1	Celsius temperature	4-2.1
activity (of a radionuclide)	6-50.1	centimeter	1-3.1
ampere	5-1.1		
		centipoise	3-19.1
ampere hour	5-2.1	centistokes	3-20.1
ampere per meter	5-21.1	charge, electric	5-2.1
angle, plane	Note e, 1-1.1	circular mil	1-4.1
angle, solid	1-2.1	conductance, electric	5-42.1
angstrom	1-3.1, 6-3.1		
angular momentum	3-6.1	conductivity, electric	5-44.1
angular velocity	1-8.1	conductivity, thermal	4-7.1
		conversion factors	Foreword C
ANMC Metric Editorial		coulomb	5-2.1
Guide	Foreword D	coulomb per kilogram	6-53.1
ANSI Standard Z 210.1	Foreword		
area	1-4.1	cubic centimeter	1-5.1
ASTM Standard E380	Foreword	cubic decimeter (liter)	1-5.1
atmosphere	3-11.1	cubic dekameter	1-5.1
		cubic foot	1-5.1
bar	3-11.1	cubic inch	1-5.1
barrel (oil)	1-5.1		
becquerel	6-50.1	cubic meter	1-5.1
board foot	1-5.1	cubic yard	1-5.1
British thermal unit	3-22.1	cup	Note g, 1-5.1
		curie	6-50.1
		current	5-1.1
		cycle per second	2-3.1
British thermal unit			
inch per square-foot hour °F	4-7.1	day	1-6.1
British thermal unit		degree, angle	Note e, 1-1.1
per °F	4-10.1, 4-13.1	degree, Celsius	4-2.1, 4-2.1a
British thermal unit		degree, Fahrenheit	4-1.1 etc.
per hour	3-23.1	degree, temperature	4-1.1 etc.
British thermal unit			
per pound	4-16.1	density	3-2.1
British thermal unit per		derived quantities	Foreword B
pound °F	4-11.1, 4-14.1	dose, absorbed	6-51.1
British thermal unit per		dose equivalent	6-52.1
second	3-23.1	dynamic viscosity	3-19.1
British thermal unit per			
 square-foot hour °F	4-8.1		
bushel	1-5.1		
calorie	3-22.1		
Calorie (kilocalorie)	Note b		
candela	6-19.1		
candela per square centimeter	6-22.1		
candela per square meter	6-22.1		

electric units	5	hectare	1-4.1
electromagnetic radiation	6	henry	5-27.1
electromotive force	5-6.1	hertz	2-3.1
energy	3-22.1	horsepower	3-23.1
energy, specific	4-16.1	hour	1-6.1
entropy	4-13.1	IEEE Standard 268	Foreword
entropy, specific	4-14.1	illuminance	6-24.1
exitance, luminous	6-23.1	inch (length)	1-3.1
expansion (linear) per degree (temp)	4-3.1	inch (mercury)	3-11.1
exposure (x- and gamma rays)	6-53.1	inch (water)	3-11.1
Fahrenheit temperature	4-1.1 etc.	inductance	5-27.1
farad	5-11.1	inertia, moment of	3-7.1
fathom	1-3.1	intensity, luminous	6-19.1
field strength, magnetic	5-21.1	intensity, radiant	6-11.1
flow rates	Foreword B	international foot	1-3.1
fluid ounce	1-5.1	international mile	1-3.1
flux density, magnetic	5-24.1	international units (length and area)	Note d
flux, luminous	6-20.1	irradiance	6-14.1
flux, magnetic	5-25.1	ISO Standard 1000	Foreword A
footcandle	6-24.1	joule	3-22.1
foot lambert	6-22.1	kelvin	4-1.1, a
foot (length)	1-3.1	kilocalorie	Note b
foot per second	1-10.1	kilogram	3-1.1
foot per second-squared	1-11.1	kilogram meter	3-1.1a
foot pound (force)	3-22.1	kilogram meter per second	3-5.1
foot pound (force) per second	3-23.1	kilogram meter-squared	3-7.1
foot (water)	3-11.1	kilogram meter-squared per second	3-6.1
force	3-8.1	kilogram per cubic meter	3-2.1
force, moment of	3-10.1	kilojoule	3-22.1
frequency	2-3.1	kilojoule per °C	4-10.1
frequency, rotational	2-3.2	kilojoule per kelvin	4-13.1
fuel consumption	Note c	kilojoule per kilogram	4-16.1
fuel efficiency	Note c, 1-3.1a	kilojoule per kilogram °C	4-11.1
gallon	1-5.1	kilojoule per kilogram kelvin	4-14.1
gauss	5-24.1	kilometer	1-3.1
gigapascal, stress	3-11.2	kilometer per hour	1-10.1
grain	3-1.1	kilometer per liter	1-3.1a
gram	3-1.1	kilonewton	3-8.1
gray	6-51.1	kilopascal, pressure	3-11.1
heat	4, 3-22.1	kilopascal, stress	3-11.2
heat capacity	4-10.1	kilopound (force)	3-8.1
heat capacity, specific	4-11.1	kilopound (force) per square inch	3-11.2
heat flow rate	3-23.1		
heat transfer coefficient	4-8.1		

kilowatt	3-23.1	micrometer	1-3.1
kilowatt hour	3-22.1	microtesla	5-24.1.
kinematic viscosity	3-20.1	micron	1-3.1
kitchen measures	Note g	mil, circular	1-4.1
knot	Note f, 1-10.1	mil (length)	1-3.1
		mile	1-3.1
lambert	6-22.1	mile, nautical	Note f, 1-3.1
length	1-3.1	mile per gallon	Note c, 1-3.1a
light	6	mile per hour	1-10.1
light, quantity of	6-21.1	millibar	3-11.1
limits, maximum-minimum	Foreword D	milligram	3-1.1
linear expansion coefficient	4-3.1	milliliter	1-5.1
liter	1-5.1	millimeter (length)	1-3.1
liter per 100 kilometers	Note c,	millimeter (mercury)	3-11.1
long ton	3-1.1	millipascal second	3-19.1
lumen	6-20.1	minute, angle	Note e, 1-1.1
lumen per square foot	6-23.1	minute, time	1-6.1
lumen per square meter	6-23.1	moment of force	3-10.1
lumen second	6-21.1	moment of inertia	3-7.1
luminance	6-22.1	moment of mass	3-1.1a
luminous exitance	6-23.1	momentum	3-5.1
luminous flux	6-20.1	momentum, angular	3-6.1
luminous intensity	6-19.1		
lux	6-24.1	nanometer	1-3.1, 6-3.1
		nanoohm per meter	5-43.1
magnetic field strength	5-21.1	nanoweber	5-25.1
magnetic flux	5-25.1	nautical mile	Note f, 1-3.1
magnetic flux density	5-24.1	newton	3-8.1
magnetic induction	5-24.1	newton meter	3-10.1
magnetic units	5	newton per meter	3-21.1
mass	3-1.1	oersted	5-21.1
mass, moment of	3-1.1a	ohm	5-41.1
maxwell	5-25.1	ohm circular mil per	
mechanics	3	foot	5-43.1
megajoule	3-22.1	ohm meter	5-43.1
megabecquerel	6-50.1	ounce, fluid	1-5.1
megapascal, stress	3-11.2	ounce, mass (avdp)	3-1.1
meter	1-3.1	ounce, mass (troy)	3-1.1
meter per second	1-10.1		
meter per second-squared	1-11.1	pascal, pressure	3-11.1
Metric Editorial Guide	Foreword D	pascal, stress	3-11.2
		peck	1-5.1
metric ton	3-1.1	periodic phenomena	2
metric ton per cubic meter	3-2.1	pint	1-5.1
mho	5-42.1		
mho per centimeter	5-44.1		
microinch	1-3.1		

plane angle	Note e,	1-1.1	second, angle	Note e,	1-1.1
poise		3-19.1	second, time		1-6.1
potential difference		5-6.1	short ton		3-1.1
potential, electric		5-6.1	siemens		5-42.1
poundal		3-8.1	siemens per meter		5-44.1
pound foot		3-1.1a	sievert		6-52.1
pound foot per second		3-5.1	significant digits		Foreword C, D
pound foot-squared		3-7.1	SI units		Foreword
pound foot-squared per second		3-6.1	slug		3-1.1
pound (force)		3-8.1	solid angle		1-2.1
pound (force) foot		3-10.1	space and time		1
pound (force) inch		3-10.1	specific energy		4-16.1
pound (force) per foot		3-21.1	specific entropy		4-14.1
pound (force) per square foot		3-11.2	specific heat capacity		4-11.1
pound (force) per square inch (pressure)		3-11.1	square centimeter		1-4.1
pound (force) per square inch (stress)		3-11.2	square foot		1-4.1
pound, mass (avdp)		3-1.1	square inch		1-4.1
pound per cubic foot		3-2.1	square kilometer		1-4.1
power		3-23.1	square meter		
pressure		3-11.1	square micrometer		1-4.1
 			square mile		1-4.1
quantity of heat		3-22.1	square millimeter		1-4.1
quantity of light		6-21.1	square millimeter per second		3-20.1
 			square yard		1-4.1
quart		1-5.1	statute units (length and area)		Note d
 			steradian		1-2.1
rad (absorbed dose)		6-51.1	 		
radian	Note e,	1-1.1	stokes		3-20.1
radiance		6-12.1	stress		3-11.2
radian per second		1-8.1	supplmental lists		Foreword
radiant intensity		6-11.1	surface tension		3-21.1
radiation, electromagnetic		6	survey foot		1-3.1
radionuclide, activity of		6-50.1	survey mile		1-3.1
rates		Foreword F	survey units (length and area)		Note d
refrigeration ton		3-23.1	 		
rem (dose equivalent)		6-52.1	tablespoon	Note g,	1-5.1
resistance, electric		5-41.1	teaspoon	Note g,	1-5.1
resistivity, electric		5-43.1	temperature (discussion)	Note a	
 			temperature interval		4-1.1a, 4-2.1a
reverse conversion		Foreword C	temperature, thermodynamic		4-1.1
revolution per minute		2-3.2	 		
revolution per second		2-3.2	 		
roentgen		6-53.1	 		
rotational frequency		2-3.2	 		
rounding		Foreword D	 		

tesla	5-24.1
thermal conductivity	4-7.1
thermodynamic temperature	4-1.1
time	1-6.1
ton (mass)	3-1.1
ton (metric) per cubic meter	3-2.1
ton per cubic yard	3-2.1
ton (refrigeration)	3-23.1
torque	3-10.1
transfer coefficient, heat	4-8.1
troy ounce	3-1.1
velocity	1-10.1
velocity, angular	1-8.1
viscosity, dynamic	3-19.1
viscosity, kinematic	3-20.1
volt	5-6.1
volume	1-5.1
watt	3-23.1
watt per meter °C	4-7.1
watt per steradian	6-11.1
watt per steradian square-meter	6-12.1
watt per square meter	6-14.1
watt per square-meter °C	4-8.1
wavelength	6-3.1
weber	5-25.1
weight	Note h, 3-1.1
work	3-22.1
yard	1-3.1

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice.

2. The second part outlines the procedures for handling discrepancies between the recorded amounts and the actual cash received. It suggests a systematic approach to identifying and resolving such issues.

3. The third part details the requirements for the monthly reconciliation process. It states that the books must be balanced at the end of each month, and any variances must be explained and approved by the appropriate authority.

4. The final part provides guidelines for the safekeeping of financial records. It recommends storing original documents in a secure, fireproof location and maintaining backup copies of all digital records.

