

Republika ng Pilipinas
(Republic of the Philippines)
MINISTRI NG EDUKASYON AT KULTURA
(MINISTRY OF EDUCATION AND CULTURE)
Maynila

November 4, 1980

MEC O R D E R
No. 48, s. 1980

STRICT ENFORCEMENT OF THE USE OF THE METRIC SYSTEM

To: Bureau Directors
Regional Directors
Cultural Agency Directors
Chiefs of Services and Heads of Units
Presidents, State Colleges and Universities
Heads of Private Schools, Colleges
and Universities

1. Batas Pambansa Blg. 8 provides that effective January 1, 1983, the metric system (SI) shall be the sole measurement system to be used in the Philippines for all products, commodities, materials, utilities, services, and commercial transactions, in all contracts, and deeds and other official and legal instruments and documents. It further provides that any violation of this provision or of the rules and regulations appertaining thereto, shall subject the offender to a fine of not more than one thousand pesos (₱1,000) or imprisonment for a term of not more than one year, or both.

2. Conformably to the aforementioned provision, it is desired that all pupils and students in the different schools, colleges and universities in the country be trained in the correct usage of the metric system. For this purpose, tables 23 to 26 are inclosed to serve as guides for conversion from the English measurement units to the metric units.

3. Reference may also be made to previous regulations of this Office, specifically Department Memorandums Nos. 160 s. 1975 and 291, s. 1976, entitled "Use of the Metric System in School Activities" and "Use of the Metric System in Schools," respectively. Both memorandums urge the use of the metric system in classroom instruction and other school activities.

4. Batas Pambansa Blg. 8 also provides for the observance of National Metrication Month in November of each year until 1983 "in order to enhance nationwide awareness of metric conversion by the people and all sectors of society and facilitate the necessary adjustments to the exclusive use of the metric system." The observance of the Month will provide an opportunity for school officials and teachers to organize appropriate activities in the schools, including dissemination of information materials, about the metric system.

It is desired that this Memorandum be given wide publicity and a report on the implementation of its provision be included in the annual report.

(SGD.) ONOFRE D. CORPUZ
Minister of Education and Culture

Incls.:

As stated

References:

Department Memorandums: (Nos. 160, s. 1975 and 291, s. 1976)

Allotment: 1-2-3-4--(D.O. 1-76)

To be indicated in the Perpetual Index
under the following subjects:

CELEBRATIONS & FESTIVALS
LEGISLATION
RULES & REGULATIONS
SCHOOLS

Ministry of Trade
METRIC SYSTEM BOARD
Quezon City, Metro Manila

TABLE 23

Conversion Table from English to Metric Units
for Practical Uses

KNOW YOUR HEIGHT IN METRIC

ft(') in(")	=	centimetres: (cm)	:	ft(') in(")	=	centimetres: (cm)	:	ft(') in(")	=	centimetres: (cm)
6' 11"	=	211 cm	:	4' 11"	=	150 cm	:	2' 11"	=	89 cm
6' 10"	=	208 cm	:	4' 10"	=	147 cm	:	2' 10"	=	86 cm
6' 9"	=	206 cm	:	4' 9"	=	145 cm	:	2' 9"	=	84 cm
6' 8"	=	203 cm	:	4' 8"	=	142 cm	:	2' 8"	=	81 cm
6' 7"	=	201 cm	:	4' 7"	=	140 cm	:	2' 7"	=	79 cm
6' 6"	=	198 cm	:	4' 6"	=	137 cm	:	2' 6"	=	76 cm
6' 5"	=	196 cm	:	4' 5"	=	135 cm	:	2' 5"	=	74 cm
6' 4"	=	193 cm	:	4' 4"	=	132 cm	:	2' 4"	=	71 cm
6' 3"	=	191 cm	:	4' 3"	=	130 cm	:	2' 3"	=	69 cm
6' 2"	=	188 cm	:	4' 2"	=	127 cm	:	2' 2"	=	66 cm
6' 1"	=	185 cm	:	4' 1"	=	125 cm	:	2' 1"	=	64 cm
6' 0"	=	183 cm	:	4' 0"	=	122 cm	:	2' 0"	=	61 cm
5' 11"	=	180 cm	:	3' 11"	=	119 cm	:	1' 11"	=	58 cm
5' 10"	=	178 cm	:	3' 10"	=	117 cm	:	1' 10"	=	56 cm
5' 9"	=	175 cm	:	3' 9"	=	114 cm	:	1' 9"	=	53 cm
5' 8"	=	173 cm	:	3' 8"	=	112 cm	:	1' 8"	=	51 cm
5' 7"	=	170 cm	:	3' 7"	=	109 cm	:	1' 7"	=	48 cm
5' 6"	=	168 cm	:	3' 6"	=	107 cm	:	1' 6"	=	46 cm
5' 5"	=	165 cm	:	3' 5"	=	104 cm	:	1' 5"	=	43 cm
5' 4"	=	163 cm	:	3' 4"	=	102 cm	:	1' 4"	=	40 cm
5' 3"	=	160 cm	:	3' 3"	=	99 cm	:	1' 3"	=	38 cm
5' 2"	=	158 cm	:	3' 2"	=	97 cm	:	1' 2"	=	36 cm
5' 1"	=	155 cm	:	3' 1"	=	94 cm	:	1' 1"	=	33 cm
5' 0"	=	152 cm	:	3' 0"	=	91 cm	:	1' 0"	=	31 cm

This handy conversion table is designed to make it easy for a person to know his height or measure the length of a baby in the metric unit, centimetre, which is used in most metric countries for this purpose. A person 168 centimetres tall may conveniently say, in speaking, that his height is One Six Eight See Em (168 cm). Once metric units are widely used and English units are no longer used, there will be no need for conversion tables like this one. Where greater accuracy is needed to the first decimal point, use Table 24.

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TABLE 24
Conversion Table from English to Metric Units:
LENGTH OR HEIGHT

ft (') in (") = cm : ft (') in (") = cm : ft (') in (") = cm : ft (') in (") = cm												
0	1/8	0.3	:	1	4	40.6:	3	2	96.5:	5	0	152.4
	1/4	0.6	:		5	43.2:		3	99.1:		1	154.9
	3/8	1.0	:		6	45.7:		4	101.6:		2	157.5
	1/2	1.3	:		7	48.3:		5	104.1:		3	160.0
	5/8	1.6	:		8	50.8:		6	106.7:		4	162.6
	3/4	1.9	:		9	53.3:		7	109.2:		5	165.1
	7/8	2.2	:		10	55.9:		8	111.8:		6	167.6
	1	2.5	:		11	58.4:		9	114.3:		7	170.2
	2	5.1	:	2	0	61.0:		10	116.8:		8	172.7
	3	7.6	:		1	63.5:		11	119.4:		9	175.3
	4	10.2	:		2	66.0:	4	0	121.9:		10	177.8
	5	12.7	:		3	68.6:		1	124.5:		11	180.3
	6	15.2	:		4	71.1:		2	127.0:	6	0	182.9
	7	17.8	:		5	73.7:		3	129.5:		1	185.4
	8	20.3	:		6	76.2:		4	132.1:		2	188.0
	9	22.9	:		7	78.7:		5	134.6:		3	190.5
	10	25.4	:		8	81.3:		6	137.2:		4	193.0
	11	27.9	:		9	83.8:		7	139.7:		5	195.6
1	0	30.5	:		10	86.4:		8	142.2:		6	198.1
	1	33.0	:		11	88.9:		9	144.8:		7	200.7
	2	35.6	:	3	0	91.4:		10	147.3:		8	203.2
	3	38.1	:		1	94.0:		11	149.9:		9	205.7

(Continuation on next page) *

TABLE 24

Conversion Table from English to Metric Units:

LENGTH OR HEIGHT

ft (')		in(")		= cm		:ft(')		in(")		= cm	
10	208.3:	7	8	233.7:	8	6	259.1:	9	4	284.5	
11	210.8:		9	236.2:		7	261.6:		5	287.0	
0	213.4:		10	238.8:		8	264.2:		6	289.6	
1	215.9:		11	241.3:		9	266.7:		7	292.1	
2	218.4:	8	0	243.8:	10		269.2:		8	294.6	
3	221.0:		1	246.4:		11	271.8:		9	297.2	
4	223.5:		2	248.9:	9	0	274.3:		10	299.7	
5	226.1:		3	251.5:		1	276.9:		11	302.3	
6	228.6:		4	254.0:		2	279.4:	10	0	304.8	
7	231.1:		5	256.5:		3	281.9:				

Guide:

To find the equivalent of height, length, width or thickness in metric unit, convert the English units of feet (ft) and inches (in) to centimetres (cm). The figure in the column "cm" is the nearest metric equivalent of the corresponding figures under "ft" and "in". Thus, 5 ft 4 in would be equivalent to 162.6 cm or, rounded out, 163 cm or 1.63 met (1.63 m). 100 cm = 1 m

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TABLE 25
HOW TO CONVERT COMMON MEASUREMENTS
FROM ENGLISH TO METRIC UNITS
FOR ORDINARY USE

TO MEASURE	<u>English Units</u> TAKE THE NUMBER OF	MULTIPLY BY	$\frac{1}{/}$	<u>Metric Units</u> EQUALS THE NUMBER IN
<u>LENGTH</u>	inches (in)	25.4*		millimetres (mm) $\frac{2}{/}$
	inches (in)	2.54*		centimetres (cm)
	inches (in)	0.025		metres (m)
	feet (ft)	0.305		metres (m)
	feet (ft)	30.48*		centimetres (cm)
	yards (yd)	0.914		metres (m)
	miles (mi)	1.609		kilometres (km)
<u>AREA</u>	square inches (in ²)	6.45		square centimetres (cm ²) $\frac{2}{/}$
	square feet (ft ²)	929.0		square centimetres (cm ²)
	square feet (ft ²)	0.093		square metres (m ²)
	square yards (yd ²)	0.84		square metres (m ²)
	square miles (m ²)	2.59		square kilometres (km ²)
<u>VOLUME</u> (Solids)	cubic inches (in ³)	16.39		cubic centimetres (cm ³)
	cubic feet (ft ³)	0.028		cubic metres (m ³)
	cubic yards (yd ³)	0.765		cubic metres (m ³)
<u>VOLUME</u> (Liquids)	fluid ounces (fl.oz.)	29.57		millilitres (mL)
	pints (pt)	0.47		litres (L)
	quarts (qt)	0.95		litres (L)
<u>U.S.</u>	gallons (gal)	3.79		litres (L)
	<u>English</u>			
<u>U.S.</u>	fluid ounces (fl.oz)	28.41		millilitres (mL)
	pints (pt)	0.57		litres (L)
	quarts (qt)	1.14		litres (L)
	gallons (gal)	4.55		litres (L)
<u>MASS OR</u>	ounces (oz)	28.35		grams (g)
	<u>WEIGHT</u>			
<u>WEIGHT</u>	pounds (lb)	453.6		grams (g)
	<u>Avoir-</u>			
<u>dupois</u>	short tons (s.t.)	907.18		kilograms (kg)
	(2000 lb)	0.907		tonnes (t)
<u>long tons</u>	long tons (l.t.)	1016.05		kilograms (kg)

TABLE 25

METRIC SYSTEM BOARD

HOW TO CONVERT COMMON MEASUREMENTS FROM ENGLISH TO METRIC UNITS

Page 2

<u>TO MEASURE</u>	<u>English Units</u> TAKE THE NUMBER OF	MULTIPLY BY ^{1/}	<u>Metric Units</u> EQUALS THE NUMBER IN
<u>TROY</u> (12 troy ounces = 1 lb; for jewelers)	ounces (oz)	31.104	grams (g) ^{2/}
	pounds (lbs)	373.241	grams (g)
<u>TEMPERATURE</u>	degrees Fahrenheit (°F)	5/9 (after sub-degrees Celsius (°C) subtracting 32)	
<u>TIME</u>	Same units are used in both the Metric and English systems: second (s), minute (min) and hour (h).		
<u>SPEED OR VELOCITY</u>	miles per hour (mph)	1.609	kilometres per hour (km/h)
	feet per second (ft/s)	0.305	metre per second (m/s)
	knots	1	nautical mile per hour (n mile/h)
<u>FREQUENCY</u> (Radio, FM, AM, TV, etc.)	cycle per second (c/s)	1	hertz (Hz)
<u>POWER</u>	horsepower (hp)	0.746	kilowatt (kW)
<u>ELECTRIC CURRENT</u>	ampere (A) (Same unit in both Metric and English systems)		
<u>ENERGY</u>	British Thermal Unit (BTU)	1.055	kilojoule (kJ)
	calories, int'l. table (cal IT)	4.187	joules (J)
	calories, thermo-chemical (cal)	4.184	joules (J)
<u>FORCE</u>	pound-force (lbf)	4.448	newton (N)
	kilogram-force (kgf)	9.807	newton (N)
<u>PRESSURE OR STRESS</u>	pound per square inch (psi)	6.895	kilopascal (kPa)
<u>DENSITY</u>	pounds per cubic inch (lb/in ³)	27.68	grams per cubic centimetre (g/cm ³)

Ministry of Trade
METRIC SYSTEM BOARD
Quezon City, Metro Manila

TABLE 26

Conversion Table from English to Metric Units
for Practical Uses

KNOW YOUR MASS (WEIGHT) IN METRIC

pounds (lb)	kilograms (kg)	pounds (lb)	kilograms (kg)	pounds (lb)	kilograms (kg)	pounds (lb)	kilograms (kg)
250 lb = 113.4 kg	:	220 lb = 99.8 kg	:	190 lb = 86.2 kg	:	160 lb = 72.6 kg	:
249 lb = 112.9 kg	:	219 lb = 99.3 kg	:	189 lb = 85.7 kg	:	159 lb = 72.1 kg	:
248 lb = 112.5 kg	:	218 lb = 98.9 kg	:	188 lb = 85.3 kg	:	158 lb = 71.7 kg	:
247 lb = 112.0 kg	:	217 lb = 98.4 kg	:	187 lb = 84.8 kg	:	157 lb = 71.2 kg	:
246 lb = 111.6 kg	:	216 lb = 98.0 kg	:	186 lb = 84.4 kg	:	156 lb = 70.8 kg	:
245 lb = 111.1 kg	:	215 lb = 97.5 kg	:	185 lb = 83.9 kg	:	155 lb = 70.3 kg	:
244 lb = 110.7 kg	:	214 lb = 97.1 kg	:	184 lb = 83.5 kg	:	154 lb = 69.9 kg	:
243 lb = 110.2 kg	:	213 lb = 96.6 kg	:	183 lb = 83.0 kg	:	153 lb = 69.4 kg	:
242 lb = 109.8 kg	:	212 lb = 96.2 kg	:	182 lb = 82.6 kg	:	152 lb = 69.0 kg	:
241 lb = 109.3 kg	:	211 lb = 95.7 kg	:	181 lb = 82.1 kg	:	151 lb = 68.5 kg	:
240 lb = 108.9 kg	:	210 lb = 95.3 kg	:	180 lb = 81.7 kg	:	150 lb = 68.0 kg	:
239 lb = 108.4 kg	:	209 lb = 94.8 kg	:	179 lb = 81.2 kg	:	149 lb = 67.6 kg	:
238 lb = 108.0 kg	:	208 lb = 94.4 kg	:	178 lb = 80.7 kg	:	148 lb = 67.1 kg	:
237 lb = 107.5 kg	:	207 lb = 93.9 kg	:	177 lb = 80.3 kg	:	147 lb = 66.7 kg	:
236 lb = 107.1 kg	:	206 lb = 93.4 kg	:	176 lb = 79.8 kg	:	146 lb = 66.2 kg	:
235 lb = 106.6 kg	:	205 lb = 93.0 kg	:	175 lb = 79.4 kg	:	145 lb = 65.8 kg	:
234 lb = 106.1 kg	:	204 lb = 92.5 kg	:	174 lb = 78.9 kg	:	144 lb = 65.3 kg	:
233 lb = 105.7 kg	:	203 lb = 92.1 kg	:	173 lb = 78.5 kg	:	143 lb = 64.9 kg	:
232 lb = 105.2 kg	:	202 lb = 91.6 kg	:	172 lb = 78.0 kg	:	142 lb = 64.4 kg	:
231 lb = 104.8 kg	:	201 lb = 91.2 kg	:	171 lb = 77.6 kg	:	141 lb = 64.0 kg	:
230 lb = 104.3 kg	:	200 lb = 90.7 kg	:	170 lb = 77.1 kg	:	140 lb = 63.5 kg	:
229 lb = 103.9 kg	:	199 lb = 90.3 kg	:	169 lb = 76.7 kg	:	139 lb = 63.1 kg	:
228 lb = 103.4 kg	:	198 lb = 89.8 kg	:	168 lb = 76.2 kg	:	138 lb = 62.6 kg	:
227 lb = 103.0 kg	:	197 lb = 89.4 kg	:	167 lb = 75.8 kg	:	137 lb = 62.1 kg	:
226 lb = 102.5 kg	:	196 lb = 88.9 kg	:	166 lb = 75.3 kg	:	136 lb = 61.7 kg	:
225 lb = 102.1 kg	:	195 lb = 88.5 kg	:	165 lb = 74.8 kg	:	135 lb = 61.2 kg	:
224 lb = 101.6 kg	:	194 lb = 88.0 kg	:	164 lb = 74.4 kg	:	134 lb = 60.9 kg	:

TABLE 26

Conversion Table from English to Metric Units
for Practical Uses

KNOW YOUR MASS (WEIGHT) IN METRIC

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pounds (lb)	kilograms (kg)	pounds (lb)	kilograms (kg)	pounds (lb)	kilograms (kg)	pounds (lb)	kilograms (kg)
130 lb = 59.0 kg	:	100 lb = 45.4 kg	:	70 lb = 31.8 kg	:	40 lb = 18.1 kg	
129 lb = 58.5 kg	:	99 lb = 44.9 kg	:	69 lb = 31.3 kg	:	39 lb = 17.7 kg	
128 lb = 58.1 kg	:	98 lb = 44.5 kg	:	68 lb = 30.8 kg	:	38 lb = 17.2 kg	
127 lb = 57.6 kg	:	97 lb = 44.0 kg	:	67 lb = 30.4 kg	:	37 lb = 16.8 kg	
126 lb = 57.2 kg	:	96 lb = 43.5 kg	:	66 lb = 29.9 kg	:	36 lb = 16.3 kg	
125 lb = 56.7 kg	:	95 lb = 43.1 kg	:	65 lb = 29.5 kg	:	35 lb = 15.9 kg	
124 lb = 56.3 kg	:	94 lb = 42.6 kg	:	64 lb = 29.0 kg	:	34 lb = 15.4 kg	
123 lb = 55.8 kg	:	93 lb = 42.2 kg	:	63 lb = 28.6 kg	:	33 lb = 15.0 kg	
122 lb = 55.3 kg	:	92 lb = 41.7 kg	:	62 lb = 28.1 kg	:	32 lb = 14.5 kg	
121 lb = 54.9 kg	:	91 lb = 41.3 kg	:	61 lb = 27.7 kg	:	31 lb = 14.1 kg	
120 lb = 54.4 kg	:	90 lb = 40.8 kg	:	60 lb = 27.2 kg	:	30 lb = 13.6 kg	
119 lb = 53.0 kg	:	89 lb = 40.4 kg	:	59 lb = 26.8 kg	:	29 lb = 13.2 kg	
118 lb = 53.5 kg	:	88 lb = 39.9 kg	:	58 lb = 26.3 kg	:	28 lb = 12.7 kg	
117 lb = 53.1 kg	:	87 lb = 39.5 kg	:	57 lb = 25.9 kg	:	27 lb = 12.3 kg	
116 lb = 52.6 kg	:	86 lb = 39.0 kg	:	56 lb = 25.4 kg	:	26 lb = 11.8 kg	
115 lb = 52.2 kg	:	85 lb = 38.6 kg	:	55 lb = 25.0 kg	:	25 lb = 11.3 kg	
114 lb = 51.7 kg	:	84 lb = 38.1 kg	:	54 lb = 24.5 kg	:	24 lb = 10.9 kg	
113 lb = 51.3 kg	:	83 lb = 37.7 kg	:	53 lb = 24.0 kg	:	23 lb = 10.4 kg	
112 lb = 50.8 kg	:	82 lb = 37.2 kg	:	52 lb = 23.6 kg	:	22 lb = 10.0 kg	
111 lb = 50.4 kg	:	81 lb = 36.7 kg	:	51 lb = 23.1 kg	:	21 lb = 9.5 kg	
110 lb = 49.9 kg	:	80 lb = 36.3 kg	:	50 lb = 22.7 kg	:	20 lb = 9.1 kg	
109 lb = 49.4 kg	:	79 lb = 35.8 kg	:	49 lb = 22.2 kg	:	19 lb = 8.6 kg	
108 lb = 49.0 kg	:	78 lb = 35.4 kg	:	48 lb = 21.8 kg	:	18 lb = 8.2 kg	
107 lb = 48.5 kg	:	77 lb = 34.9 kg	:	47 lb = 21.3 kg	:	17 lb = 7.7 kg	
106 lb = 48.1 kg	:	76 lb = 34.5 kg	:	46 lb = 20.9 kg	:	16 lb = 7.3 kg	
105 lb = 47.6 kg	:	75 lb = 34.0 kg	:	45 lb = 20.4 kg	:	15 lb = 6.8 kg	
104 lb = 47.2 kg	:	74 lb = 33.6 kg	:	44 lb = 20.0 kg	:	14 lb = 6.4 kg	
103 lb = 46.7 kg	:	73 lb = 33.1 kg	:	43 lb = 19.5 kg	:	13 lb = 5.9 kg	