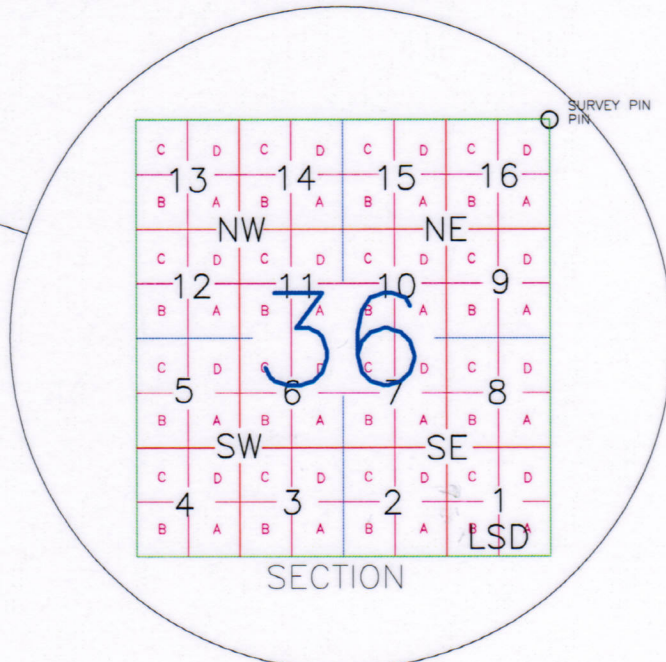
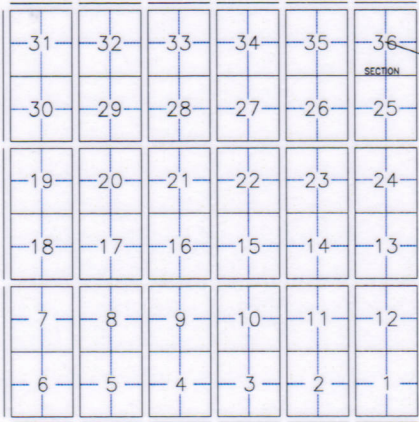


TOWNSHIP



USEFUL DATA

LINEAR	SQUARE
1 INCH (IN.) = 1000 MILS	1 SQ. MIL = 1,273 CIR MILS
1 FOOT (FT.) = 12 INCHES	1 SQ. FT. = 144 SQ. IN.
1 YARD (YD.) = 3 FEET	1 SQ. YD. = 9 SQ. FT.
1 MILE (MI.) = 5280 FEET	1 ACRE = 43560 SQ. FT.
1 NAUTICAL MILE = 6080 FEET	1 SQ. MI. = 640 ACRES

VOLUME

DRY	LIQUID
1 CU. FT. = 1728 CU. IN.	1 PINT = 16 FLUID OUNCES
1 CU. YD. = 27 CU. FT.	1 QUART = 2 PINTS
1 QUART = 2 PINTS	1 GALLON (GAL.) = 4 QUARTS
1 PECK = 8 QUARTS	1 GAL. U.S. = 231 CU. IN.
1 BUSHEL (BU.) = 4 PECKS	1 GAL., IMPERIAL = 277.274 CU. IN.
1 BU. U.S. = 1,244 CU. FT.	1 GAL., IMPERIAL = 1.201 GAL., U.S.
1 BU. IMPERIAL = 1.284 CU. FT.	1 BARREL, WINE = 31.5 GAL.
1 BU. IMPERIAL = 1.032 BU. U.S.	1 BARREL, OIL = 42 GAL.
1 BARREL, DRY = 4.08 CU. FT.	1 HOGSHEAD = 63 GAL.

AVOIRDUPOIS

WEIGHT	TROY
1 OUNCE (OZ) = 437.5 GRAINS	1 PENNY WEIGHT = 24 GRAINS
1 POUND (LB) = 16 OZ	1 OZ. = 20 PENNYWEIGHTS
1 LB. = 16 OZ	1 OZ. = 480 GRAINS
1 SHORT TON = 2000 LBS.	1 LB. = 12 OZ.
1 LONG TON = 2240 LBS.	1 LB. = 5760 GRAINS
1 CU. FT. = 7.4805 GAL.	1 SCRUPLE = 20 GRAINS
1 CU. FT. WATER, 70 DEG. = 62.31 LBS	1 DRAM = 3 SCRUPLES
1 CU. FT. WATER, 212 DEG. = 59.82 LBS	1 OZ. = 8 DRAMS
1 GAL. WATER, 70 DEG. = 33 LBS	
1 GAL. WATER, 212 DEG. = 8 LBS	

THE GRAIN IS THE SAME WEIGHT IN ALL THREE SYSTEMS OF MEASUREMENTS

PRESSURE

1 LB./SQ. IN. = { 144 LB./SQ. FT. }	{ 2.311 FT. WATER AT 70 DEG. }
{ 2.036 IN. Hg AT 32 DEG. }	{ 27.74 IN. WATER AT 70 DEG. }
1 OZ./SQ. IN. = 1.733 IN. WATER AT 70 DEG. = 0.1272 IN. Hg AT 32 DEG.	
1 ATMOSPHERE = { 29.92 IN. Hg AT 32 DEG. }	{ 2116.3 LB./SQ. FT. }
{ 33.96 FT. WATER AT 70 DEG. }	
1 IN. WATER AT 70 DEG. = 5.196 LB./SQ. FT. = 0.5774 OZ./SQ. IN.	
1 FT. WATER AT 70 DEG. = 62.31 LB./SQ. FT. = 0.433 LB./SQ. IN.	
1 IN. Hg AT 32 DEG. = { 13.63 IN. WATER AT 70 DEG. }	{ 0.491 LB./SQ. IN. }
{ 1.136 FT. WATER AT 70 DEG. }	{ 7.86 OZ./SQ. IN. }

POWER

1 BOILER HP = 33479 BTU/HR. = EVAP. OF 34.5 LB. WATER/HR. FROM & AT 212 DEG.
1 MECH. HP. = 42.4 BTU/MIN. = 33000 FT. LB./MIN.
1 KILOWATT = 1000 WATTS = 56.9 BTU/MIN. = 1.3405 HP
1 TON REFRIG. = 199.07 BTU/MIN. = APPROX. 200 BTU/MIN.

WORK

1 HP. - HR. = 1980000 FT. LB. = 2544 BTU = 0.746 KILOWATT - HR.
1 WATT HR. = 2655.4 FT. LB. = 3.412 BTU = 0.00134 HP. - HR.
1 BTU = 778.26 FT. LB. = 0.2931 WATT - HR. = 0.000393 HP. - HR.
1 THERM. (GAS) = 100000 BTU = 1 CENTIGRADE THERMAL UNIT = 1.8 BTU

MISC.

1 MI./MIN. = 88 FT./SEC.	1 MI./HR. = 88 FT./MIN.
1 KNOT = 1.152 MI./HR.	1 KIP (KILOPOUND) = 1000 LB.
1 REV./SEC. = 6.2832 RADIAN/SEC.	
LATENT HT. OF ICE = 144 BTU/LB.	
HEAT OF SUBLIMATION OF CO2 (1 ATMOS) = 248 BTU/LB.	
SENS. HT. OF CO2 (-109 DEG. F TO 70 DEG. F) = 34.4 BTU/LB.	
TOTAL HT. OF CO2 (SOLID CO2 TO GAS AT 70 DEG. F) (-109 DEG. F TO 70 DEG. F) = 282.4 BTU/LB.	

METRIC-ENGLISH CONVERSION UNITS

LENGTH	AREA
1 METER (M) = 3.281 FEET	1 SQ. METER = 10,765 SQ. FT.
1 FOOT (FT.) = 0.3048 METERS	1 SQ. FT. = 0.0929 SQ. METERS
1 CENTIMETER (CM.) = 0.3937 INCHES	1 SQ. CM. = 0.0155 SQ. IN.
1 INCH (IN.) = 2.54 CM	1 SQ. IN. = 6.45 SQ. CM
	1 SQ. METER = 1.196 SQ. YD.
	1 SQ. YD. = 0.836 SQ. METERS

VOLUME

1 CU. CM = 0.061 CU. IN.	1 GRAM = 15.43 GRAINS
1 CU. IN. = 16.39 CU. CM	1 GRAIN = 64.8 MILLIGRAMS
1 CU. M = 35.32 CU. FT.	1 KILOGRAM (KG) = 2.2046 LB.
1 CU. FT. = 0.0283 CU. M	1 LB. = 0.4536 KG
1 LITRE (1000 CU. CM) = 0.264 GAL.	1 METRIC TON = 2205 LBS. (AVOIR)
1 LITRE = 0.0353 CU. FT.	1 METRIC TON = 1.102 SHORT TONS

DENSITY

1 GRAM/CU. CM = 62.43 LB./CU. FT.	1 GRAM (FORCE) = 980.59 DYNES
1 MET. TON/CU. M = 62.43 LB./CU. FT.	1 DYNE = 7.233*10 ⁻⁵ POUNDALS
1 MILLIGRAM/LITRE = 0.437 GRAINS/CU. FT.	1 KILOGRAM (FORCE) = 2.205 LB. (FORCE)
1 GRAM/CU. CM = 8.34 LB./GAL.	1 JOULE/CM = 0.02415 LB. (FORCE)

VELOCITY

1 KILOMETER/HR. = 0.6214 MI./HR.	1 KG/SQ. CM = 14.22 LB./SQ. IN.
1 METER/SEC. = 3.281 FT./SEC.	1 GRAM/SQ. CM = 0.3937 IN. WATER 70 DEG. F
1 CM/SEC. = 0.3937 IN./SEC.	1 GRAM/SQ. CM = 0.02896 IN. Hg. 32 DEG. F

ENERGY

1 JOULE (WATT SEC.) = 0.000948 BTU	1 METRIC HP = 0.986 HP. US
= 10 ⁻⁷ ERG = 0.7377 FT. LB.	= 75 KG M/SEC. = 543 FT. LB./SEC.
1 ERG (CM DYNE) = 0.7377*10 FT. LB.	1 WATT (JOULE/SEC.) = 0.7377 FT. LB./SEC.
1 KG METER = 7.233 FT. LB.	1 ERG/SEC. = 44.26*10 ⁻⁷ FT. LB./MIN
1 KW-HR. = 1.341 HP. HR.	1 KG CAL./MIN. = 3.97 BTU/MIN.
1 GRAM CM = 7.233*10 ⁻⁵ FT. LB.	1 KW = 1.341 HP
= 980.8 DYNE CM = 9.3*10 ⁻⁸ BTU	1 KW = 56.9 BTU/MIN.

THERMAL UNITS

1 KG CAL. = 1000 GRAM CAL.	= 3.97 BTU
1 KG METER	= 0.0093 BTU
1 JOULE (WATT SEC.)	= 0.000948 BTU
1 KG CAL./KG	= 1.8 BTU/LB.
1 JOULE/GRAM	= 0.430 BTU/LB.
1 KG CAL./CU. METER	= 0.1124 BTU/CU. FT.
1 KG CAL./LITRE	= 112.37 BTU/CU. FT.
1 GRAM CAL./GRAM/DEG. C	= 1 BTU/LB./DEG. F.
1 JOULE/GRAM/DEG. C	= 0.239 BTU/LB./DEG. F.
1 GRAM MOL (MOL WT. IN GRAMS)	= 0.0022 LB. MOL (MOL WT. IN LB.)
1 GRAM CAL./GRAM MOL	= 1.8 BTU/LB. MOL
1 GRAM CAL	= 0.00397 BTU
1 GRAM CAL/SQ. CM	= 3.687 BTU/SQ. FT.
1 GRAM CAL/SQ. CM/CM THICK	= 1.451 BTU/SQ. FT./IN. THICK
1 GRAM CAL/SQ. CM/CM THICK/DEG. C	= 0.806 BTU/SQ. FT./IN. THICK/DEG. F.
1 GRAM CAL/SEC.	= 14.29 BTU/HR
1 GRAM CAL/SEC./SQ. CM	= 13270 BTU/HR./SQ. FT.
1 GRAM CAL/SEC./SQ. CM/CM THICK	= 5225 BTU/HR./SQ.FT./IN. THICK
1 GRAM CAL/SEC./SQ. CM/CM THICK DEG. C	= 2903 BTU/HR./SQ. FT./IN. THICK

1 MILE = 1.609 KM	1 KM = 0.622 MILES
2 MILES = 3.219 KM	2 KM = 1.243 MILES
3 MILES = 4.827 KM	3 KM = 1.865 MILES
4 MILES = 6.436 KM	4 KM = 2.487 MILES
5 MILES = 8.045 KM	5 KM = 3.110 MILES
6 MILES = 9.654 KM	6 KM = 3.732 MILES