MEASUREMENTS, SYMBOLS AND TERMS YOU SHOULD KNOW

FOR FREE HOMEWORK HELP CALL: 1-212-777-3380

LENGTH

12 inches (in.)	= 1 foot (ft.)	(12″ = 1′)
3 feet	= 1 yard (yd.)	(3′ = 1 yd.)
36 in.	= 1 yd.	(36″ = 1 yd.)
16½ ft.	= 1 rod (rd.)	
320 rds.	= 1 mile (mi.)	
1760 yds.	= 1 mi.	
5280 ft.	= 1 mi.	

AREA

144 square inches (sq. in.)	= 1 square foot (sq. ft.)
9 square ft.	= 1 square yard (sq. yd.)
160 square rods	= 1 acre (a.)
640 acres	= 1 square mile (sq. mi.)

VOLUME

1728 cubic inches (cu. in.)	= 1 cubic foot (cu. ft.)
27 cubic feet	= 1 cubic yard (cu. yd.)

LIQUID MEASURE

8 fluid ounces (fl. oz.)	= 1 cup (c.)
2 cups	= 1 pint (pt.)
2 pints	= 1 quart (qt.)
4 cups	= 1 quart
32 oz.	= 1 quart
4 quarts	= 1 gallon (gal.)
8 pints	= 1 gallon

WEIGHT

16 ounces (oz.)	= 1 pound (lb.)
4 oz.	= ¼ lb. (quarter pound)
8 oz.	= ½ lb. (half pound)
12 oz.	= ¾ lb. (three quarters of a pound)
2000 lbs.	= 1 ton (T.)

METRICS

The metric system is based on our decimal system.

1	kilometer (km)	= 1000 meters
10	decimeters (dm)	= 1 meter
100	centimeters (cm)	= 1 meter
1000	millimeters (mm)	= 1 meter
1000	milliliters (ml)	= 1 liter (l.)
1	kilogram (kg)	= 1000 grams

use ***meters*** to measure length
use ***liters*** to measure liquid (capacity)
use ***grams*** to measure weight

STANDARD MEASUREMENT METRIC MEASUREMENTS

0.4	inches	= 1 centimeter
2.2	pounds	= 1 kilogram
39.4	inches	= 1 meter
1.06	quarts	= 1 liter

TEMPERATURE

Celsius Temperature =
(Fahrenheit degrees -32) x 0.56 or
(Fahrenheit degrees -32) x $^{5}/_{9}$

Fahrenheit Temperature =
(Celsius degrees x 1.8) + 32 or
(Celsius degrees x 9/5) + 32

MONEY

penny	=	1 cent;	1¢;	$ .01
nickel	=	5 cents;	5¢;	$ .05
dime	=	10 cents;	10¢;	$ .10
quarter	=	25 cents;	25¢;	$ .25
half dollar	=	50 cents;	50¢;	$ .50
dollar	=	100 cents;	100¢;	$1.00

SYMBOLS

Symbols are used instead of words in math.

=	is equal to
≠	is not equal to
>	is greater than
<	is less than
+	plus, and (used in addition) or postive number sign
-	minus, takes away (used in subtraction) or negative number sign
x	multiplied by, times (used in multiplication)
÷ ⌐	divided by (used in division)
·	a decimal point separates whole numbers from part of a whole number (1.5) or shows part of a whole (0.56)
%	percent, the number of hundredths
∈	is a member of the set
⊂	is a subset of the set
∩	is an intersection of 2 sets
∪	is a union of 2 sets

TERMS

A ***Set*** is a collection of things. You can list the members or elements of a set between braces { }.

Set A = {1,2,3}

Arrays are arrangements that have order. One array shows that 4 groups of 3 = 12. The other array shows that 3 groups of 4 = 12.

Digits are numerals. (0,1,2,3,4,5,6,7,8,9)

Area — the space covered by a surface.

Perimeter — the distance around a polygon.

GM35836

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ROMAN NUMERALS

Roman numerals have a definite pattern

I	= 1	XI	= 11	XXX	= 30
II	= 2	XII	= 12	XL	= 40
III	= 3	XIII	= 13	L	= 50
IV	= 4	XIV	= 14	LX	= 60
V	= 5	XV	= 15	LXX	= 70
VI	= 6	XVI	= 16	LXXX	= 80
VII	= 7	XVII	= 17	XC	= 90
VIII	= 8	XVIII	= 18	C	= 100
IX	= 9	XIX	= 19	CD	= 400
X	= 10	XX	= 20	D	= 500
				CM	= 900
				M	= 1000

A bar written over a numeral shows that it has been multiplied by 1000. $\overline{VII}$ = 7 x 1000 or 7000

TIME

60	seconds	=	1 minute (min.)
60	minutes	=	1 hour (hr.)
24	hours	=	1 day
7	days	=	1 week
4	weeks	=	1 month (mo.)
12	months	=	1 year (yr.)
52	weeks	=	1 year
365	days	=	1 year
366	days	=	1 leap year
10	years	=	1 decade
20	years	=	1 score
100	years	=	1 century

A.M. = morning
12:00 midnight - 12:00 noon

P.M. = afternoon
12:00 noon - 12:00 midnight

ADDITION

The operation of addition combines numbers called ***addends*** to get a total, called a ***sum***.

3 addend
+ 5 addend
8 sum

addend + addend = sum

SUBTRACTION

Subtraction is the operation when you know the total, called a ***minuend***, and one known part, called a ***subtrahend***, and are looking for an unknown part, called a ***difference***.

6 minuend
– 2 subtrahend
4 difference

minuend – subtrahend = difference

MULTIPLICATION

The operation of multiplication relates two numbers called ***factors*** with a third number called a ***product***. You are counting the same number many times which is a shorter way of adding the same number.

5 factor	5 addend
x 4 factor	5 addend
20 product	5 addend
	+5 addend
	20 sum

4	x	5	=	20
factor	x	factor	=	product
4	groups of	5	=	20

DIVISION

Division is the operation when you know the total, called a ***dividend***, and one part, called a ***divisor***, and are looking for an unknown part, called a ***quotient***.

7 quotient
divisor 8 $\overline{)56}$ dividend

56	÷	8	=	7
dividend	÷	divisor	=	quotient

FRACTIONS

A fraction is one or more of the equal parts of a whole. Numerals such as $^1/_3$ and ¼ are called fractions. The digit above the line is called the ***numerator***. It tells about the part. The digit below the line is called the ***denominator***. This number tells about the total number of parts.

2 numerator
3 denominator

¾	is a proper fraction. It is part of 1 whole.
$^4/_4$	is a fractional name for 1 whole.
$^5/_4$	is an improper fraction. It is more than 1 whole.
1 ¼	is a mixed numeral. It is 1 whole number and a fraction.

DECIMALS

A decimal is a fractional number. We can use a fraction and a decimal to name the same number.

$^1/_{10}$	=	0.1 one tenth
$^2/_{10}$	=	0.2 two tenths

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