|	
<u>acute angle</u>	an angle measuring less than 90 degrees
<u>addends</u>	numbers to be added together in an addition problem
<u>angle</u>	the measured space between two lines that meet at one point
<u>area</u>	the number of square units needed to cover a surface
<u>arithmetic</u>	having to do with addition or subtraction of terms
<u>average</u>	a number obtained by adding a group of numbers together and dividing by the number of addends; it is the same as the **mean**
<u>circle</u>	a closed, curved line. Each point on the circle is the same distance from the center of the circle
<u>circumference</u>	the distance around a circle
<u>congruent</u>	being the same
<u>diameter</u>	a line segment across a circle that contains 2 points on the circle and passes through the center point
<u>difference</u>	the answer to a subtraction problem
→ <u>divisor</u>	a number by which another number is to be divided
→ <u>dividend</u>	the number being divided by the divisor
→ <u>quotient</u>	the answer to a division problem
<u>geometric</u>	having to do with a multiplication or division of terms
<u>integer</u>	a whole number either positive, negative or zero
<u>interest</u>	a fee paid for the privilege of borrowing money

<u>least common denominator [LCD]</u>

the lowest common multiple of two or more denominators

<u>least common multiple [LCM]</u>

the lowest number (not a zero) that is a multiple of two given numbers

<u>mean</u>	a number obtained by adding a group of numbers together and dividing by the number of addends; it is the same as **the average**
<u>median</u>	the middle number in a set of numbers arranged in order; when there isn't a middle number, the median is the average of the two middle numbers
<u>obtuse angle</u>	an angle measuring more than 90 degrees
<u>of</u>	a way of expressing multiplication
<u>parallel lines</u>	two lines, the same distance apart that never intersect

Example:
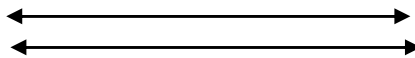
<u>parallelogram</u>   a quadrilateral with two pair of parallel sides

Example:

Or

percent   a way to compare a number to 100

    Example: $25 is 25% (percent) of $100 because:

$$\longrightarrow \text{Percent} \;=\; \frac{\text{part}}{\text{whole}} \;=\; \frac{\text{part}}{\text{total}} \;=\; \frac{25}{100} \;=\; 25\%$$
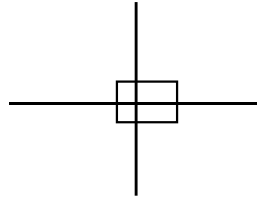
Note: Percent and Probability are one in the same

perimeter   the distance around a figure; the sum of all of its sides

perpendicular lines

     two lines that intersect (cross) and form right angles (90° angles)

    Example:

polygon   a figure bounded by three or more sides

profit   money received from a business venture after all expenses have been paid

prime number   a number that can only be divided evenly by itself and 1

probability   the likeliness that something will happen;

     mathematically, Probability $\;=\; \dfrac{\text{part}}{\text{whole}} \;=\; \dfrac{\text{part}}{\text{total}}$

quadrilateral   a polygon with four sides

right angle   an angle measuring 90 degrees

right triangle   a triangle that has one right angle

sale price   a price that is lower than the original price for an item

sales tax   an amount of money added to the price of an item that is paid to the government

sequence   a series of numbers coming one after another in a certain order

square   a figure with 4 right angles and 4 equal sides

square root $\sqrt{}$; a number that when multiplied by itself will produce a certain number

    Example: $\sqrt{169}$ = the square root of 169 = 13;

trapezoid   a quadrilateral with a pair of parallel sides

triangle   a polygon with three sides

volume   the amount of space occupied by an object, expressed in cubic units where the formula is: **length x width x height**

L = length	b = base	r = radius of a circle
W = width	h = height of triangle or trapezoid	D = diameter of a circle
A = area	b_1 = parallel base (of trapezoid)	C = circumference of a circle
P = perimeter	b_2 = parallel base (of trapezoid)	

Temperature - Celsius		Capacity	

Temperature - Celsius

0°C	the freezing point of water
37°C	the normal body temperature
100°C	the boiling point of water

Capacity

1000 milliliters (ml) = 1 liter (L)
1000 liters = 1 kiloliter (kL)

Mass

1000 milligrams (mg) = 1 gram
1000 grams = 1 kilogram (kg)
1000 kilograms = 1 metric ton (t)

Length

10 millimeters (mm) = 1 centimeter
10 centimeters (cm) = 1 decimeter
1000 millimeters (mm) = 1 meter (m)
100 centimeters = 1 meter (m)
10 decimeters (dm) = 1 meter
1000 meters (m) = 1 kilometer (km)

Temperature - Fahrenheit

32°F	the freezing point of water
98.6°F	the normal body temperature
212°F	the boiling point of water

Capacity

1 cup (c)	=	8 fluid ounces (fl oz)
1 pint (pt)	=	16 fluid ounces
	=	2 cups

Weight

1 pound (LB) = 16 ounces (oz)
1 ton = 2,000 pounds

1 quart (qt)	=	32 fluid ounces
	=	4 cups
	=	2 pints

Time

1 minute (min) = 60 seconds (s)
1 hour = 60 minutes
1 day = 24 hours
1 week = 7 days
1 month (mo) = approximately 4 weeks

1 gallon(gal)	=	128 fluid ounces
	=	16 cups
	=	8 pints
	=	4 quarts

1 year (yr.)	=	365 days
		52 weeks
		12 months

Length

| 1 foot (ft) | = | 12 inches (in) |

1 decade = 10 years

| 1 yard (yd) | = | 36 inches |
| | = | 3 feet |

1 century = 100 years

| 1 mile (mi) | = | 5,280 feet |

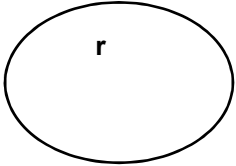| 1 inch (in) | = | 2.54 |
1 foot (ft)	=	30.48
1 meter (m)	=	39.37
1 quart (qt)	=	1.07
32°F	=	0°C
98.6°F	=	37°C
212°F	=	100°C
-40°F	=	-40°C
1 mile (mi)	=	1.609

A prime is a positive integer greater than 1 that is divisible by no integers other than 1 and itself. The integers 2, 3, 5, 13, 101, and 163 are primes.

A positive integer which is not prime, and which is not equal to 1, is called **composite**. The integers 4 (2x2), 8 (4x2), 33 (3x11), 111 (3x37) and 1001 (7x11x13) are all composite. The primes are the building blocks of the integers. Every positive integer can be rewritten uniquely as the product of primes.

In fact, all even numbers except 2 are composite. Therefore, all even numbers greater than 2 are composite. The number 1 is neither prime nor composite; it is a divisor. Additionally, some odd numbers are composite, such as: 9, 15, 21, 25, 27, 33, 35, etc..

1   Area of circle   = πr^2

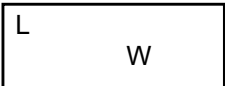where π = pi = 3.14 = $\dfrac{22}{7}$

2   Area of parallelogram = b x h   *Note* : the height of the
        where b=base and h=height   parallalegram is always
                                              perpendicular to the base.

> **Example**: if b=6 in and h=4 in, then
> Area = 6x4 = 24 sq. in = 24 in²

3   Area of rectangle   =   L x W

> **Example**: if L=5 ft and W=7 ft, then Area = 5x7 = 35 sq. ft = 35 ft²

4   Area of square   = s^2 =   s x s

> **Example**: if s=6 inches,
> then Area = 6 x 6 = 6² = 36 sq. inches = 36 in²

5   Area of trapezoid   = $\dfrac{h}{2}$ x (b$_1$ + b$_2$)

> **Example**: if b$_1$=7cm, and b$_2$=13cm,
> and h=5cm, Area = 5/2 x (7+13) =
> 5 x 10 = 50 sq. cm = 50 cm²

6 Area of triangle = ½ x (bxh) =

Note : the height of the triangle is always perpendicular to the base.

Example: if b=11 inches and
h= 13 inches, then Area = 1/2 x (11x13)
= 1/2 x (143) = 71.5 sq. in = 71.5 in²

Perimeter

Square

Rectangle

Perimeter of quadrilateral:
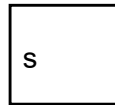
if s = 6cm,
then, P = 4s
P=4x6=24cm
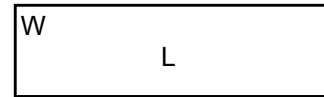
if L=10cm and W=3cm
then, P = 2L + 2W
P = 2(L + W)
P = 2(10+3)=26cm

Perimeter of triangle:
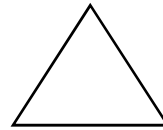
if the sides are 5cm, 7cm, and 9cm, then
P = sum of the 3 sides
P = 5 + 7 + 9 = 21cm

cubes	
1 x 1 x 1 =	1
2 x 2 x 2 =	8
3 x 3 x 3 =	27
4 x 4 x 4 =	64
5 x 5 x 5 =	125
6 x 6 x 6 =	216
7 x 7 x 7 =	343
8 x 8 x 8 =	512
9 x 9 x 9 =	729
10 x 10 x 10 =	1,000
11 x 11 x 11 =	1,331

square root	
$\sqrt{1}$	1.000
$\sqrt{2}$	1.414
$\sqrt{3}$	1.732
$\sqrt{4}$	2.000
$\sqrt{5}$	2.236
$\sqrt{6}$	2.449
$\sqrt{7}$	2.646
$\sqrt{8}$	2.828
$\sqrt{9}$	3.000
$\sqrt{10}$	3.162
$\sqrt{11}$	3.317
$\sqrt{12}$	3.464
$\sqrt{13}$	3.606

squares	
1 x 1 =	1
2 x 2 =	4
3 x 3 =	9
4 x 4 =	16
5 x 5 =	25
6 x 6 =	36
7 x 7 =	49
8 x 8 =	64
9 x 9 =	81
10 x 10 =	100
11 x 11 =	121
12 x 12 =	144
13 x 13 =	169
14 x 14 =	196
15 x 15 =	225
16 x 16 =	256
17 x 17 =	289
18 x 18 =	324
19 x 19 =	361
20 x 20 =	400
21 x 21 =	441
22 x 22 =	484
23 x 23 =	529
24 x 24 =	576
25 x 25 =	625

FRACTIONS & DECIMALS

1/2	0.500		1/9	0.111
1/3	0.333		2/9	0.222
2/3	0.667		3/9	0.333
1/4	0.250		4/9	0.444
3/4	0.750		5/9	0.556
1/5	0.200		6/9	0.667
2/5	0.400		7/9	0.778
3/5	0.600		8/9	0.889
4/5	0.800		1/10	0.100
1/6	0.167		2/10	0.200
5/6	0.833		3/10	0.300
1/7	0.143		4/10	0.400
2/7	0.286		5/10	0.500
3/7	0.429		6/10	0.600
4/7	0.571		7/10	0.700
5/7	0.714		8/10	0.800
6/7	0.857		9/10	0.900
1/8	0.125		1/12	0.083
3/8	0.375		5/12	0.417
5/8	0.625		7/12	0.583
7/8	0.875		11/12	0.917

Divisibility

2	the integer must be an even integer **Example: 2; 4; 6; 8; and 120**
3	the sum of the digits must add up to a multiple of 3 **Example: 3; 123 (adds up to 6); and 815,271 (adds up to 24 which adds up to 6)**
4	the integer must be an even integer and can be divided by 2 twice Also, the integer's last two digits are a factor of 4 **Example: 78 is even and is not divisible by 4** while 176 is even and is divisible by 2 twice, that is 176 = 44 x 2 x 2 = 44 x 4; therefore it is divisible by 4; Also, 76, which is the last two digits, is divisible by 4
5	the integer ends in 5 or 0; **Example: 25, 625, 690, 7895**
6	the integer must be an even integer and divisible by 3, that is, it is divisible by 2 and divisible by 3: (÷ 2) and (÷ 3) = (÷ 6) Or (÷ 2) x (÷ 3) = ÷ 6 **Example: 33,120 is even and is divisible by 3 so therefore it is divisible by 6** however 33,111 is divisible by 3 and is not even, so therefore it is not divisible by 6
8	the integer must be an even integer and can be divided by 2 three times, hence 2^3 = 8; that is, 2 x 2 x 2 = 8
9	the sum of the digits must add up to a multiple of 9;
10	the integer must end in zero; **Example: 20, 560, 59680**
11	the sum of the alternating digits must cancel out