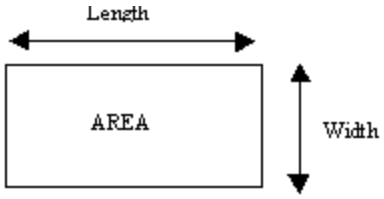
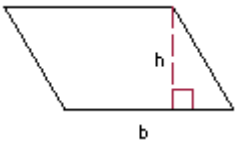
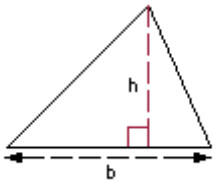
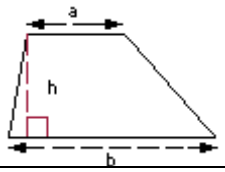
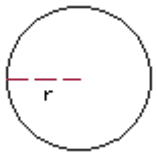
Frontier College
Literacy: Learning for Life.
Collège Frontière
L'alphabétisation, Une leçon pour la vie.

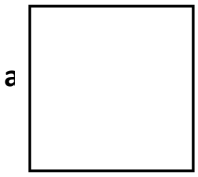
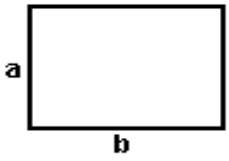
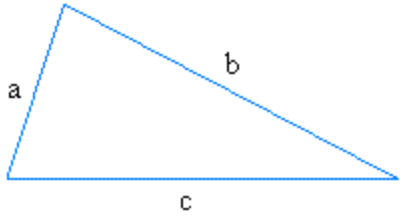
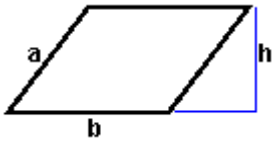
Math Formulas for Tutors and Learners - Developed Sept. 2017

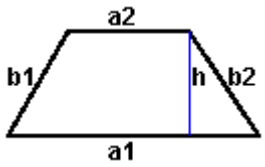
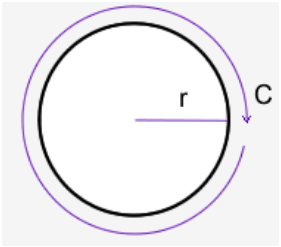
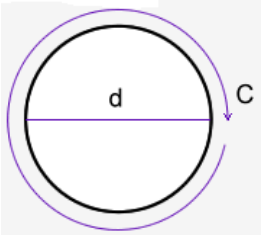
AREA:

Square	**Area = side^2** **A = a^2** (Cangiano, 2017) 
Rectangle	**Area = length x width** **A = l x w** (Kwiznet, n.d.) 
Parallelogram	**Area = base x height** **A = b x h** (Cangiano, 2017) 
Triangle	**Area = $\frac{1}{2}$ x base x height** **A = $\frac{1}{2}$ x b x h** (Cangiano, 2017) 
Trapezoid	**Area = $\frac{1}{2}$ x (base$_1$ + base$_2$) x height** **A = $\frac{1}{2}$ x (a + b) x h** (Cangiano, 2017) 

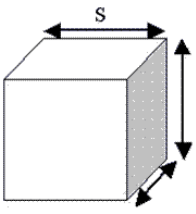
Circle	**Area = π x radius^2 ; π is approximately equal to 3.14.** **A = π x r^2** (Cangiano, 2017) 

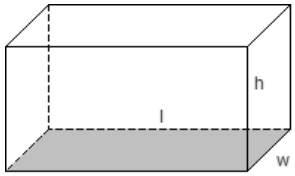
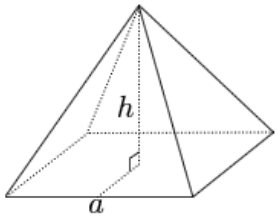
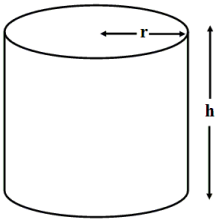
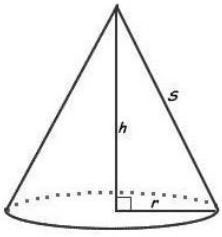
PERIMETER:

Square	**Perimeter = 4 x side** **P = 4 x a** (Dendane, 2009) 
Rectangle	**Perimeter = (2 x length) + (2 x width)** **P = (2 x a) + (2 x b)** (Dendane, 2009) 
Triangle	**Perimeter = side$_1$ + side$_2$ + side$_3$** **P = a + b +c** (Basic-Mathematics.com, 2016) 
Parallelogram	**Perimeter = 2 (side a + side b)** **P = 2 (a+b)** (Math Open Reference, 2011) 

Trapezoid	**Perimeter = side a1 + side a2 + side b1 + side b2** **P = a1+ a2 + b1 + b2** (Math Open Reference, 2011) 
Circle	***For a circle, the perimeter is called the circumference*** **The formula to calculate the circumference of a circle is:** **C = 2 x π x r *or*** **C = π x d where...** • **C = Circumference of circle** • **π = 3.141592654** • **d = diameter of circle** • **r = radius of circle** (CheckYourMath, 2017)  **or** 

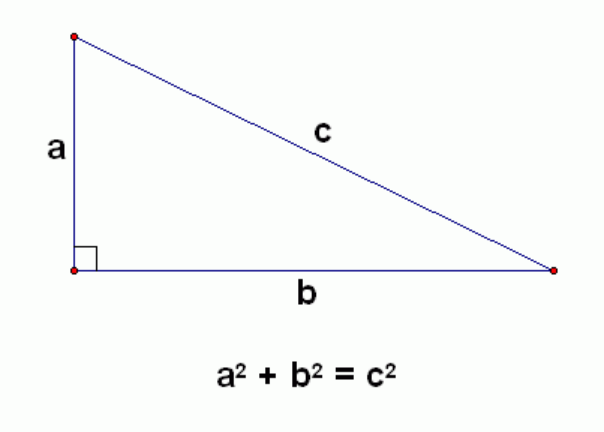
VOLUME:

Cube	**Volume = edge^3** **V = s^3** (Tutor Vista, 2017) Note: All sides are equal 

Rectangular solid	**Volume = length x width x height** **V = l x w x h** (Online Math Learning, 2015) 
Square Pyramid	**Volume = $\frac{1}{3}$ (base edge)^2 x height (all base sides are the same length)** **V = $\frac{1}{3}$ (a)^2 x h** (Casio Computer Co. Ltd. , 2017) 
Cylinder	**Volume = π x radius^2 x height; π is approximately equal to 3.14** **Volume = π x r^2 x h** (Varsity Tutors, 2017) 
Cone	**Volume = $\frac{1}{3}$ x π x radius^2 x height; π is approximately equal to 3.14** **Volume = $\frac{1}{3}$ x π x r^2 x h** (Tutor Vista, 2017) 

PYTHAGOREAN THEOREM:

Pythagorean Theorem is a way to calculate the length of one side of a right angle triangle if you know the lengths of the other two sides by using the equation: $\mathbf{a^2 + b^2 = c^2}$. In other words, the sum of the square of "side a" and "side b" of a right-angle triangle is equal to the square of the hypotenuse (side c) (ncalculator, 2017).



MEASURES OF CENTRAL TENDENCY:

Mean	The "average" number; found by adding all data points and dividing by the number of data points. For example, the mean of 4, 1, and 7 is (4+1+7)/3 = 12/3 = 4 (Khan Academy, 2017).
Median	The middle number; found by ordering all data points and picking out the one in the middle (or if there are two middle numbers, taking the mean of those two numbers. For example, the median of 4, 1, and 7 is 4 because when the numbers are put in order (1, 4, and 7), the number 4 is in the middle. (Khan Academy, 2017)
Mode	The most frequent number—that is, the number that occurs the highest number of times. For example, the mode of 4, 2, 4, 3, 2, 2 is 2 because it occurs three times, which is more than any other number (Khan Academy, 2017).

SIMPLE INTEREST, DISTANCE, TOTAL COST:

Interest	**principal x rate x time** E.g. If you borrowed $1000 dollars from the bank and it charges 20% interest annually: 1000 x 0.20 x 1 = 200. You would have to pay the bank back $1200 next year. (wikiHow, n.d.)
Distance	**rate x time** E.g. If asked to determine how far a car traveled if it traveled at 60 km per hour for 5 hours : 60 x 5 = 300 km.
Total Cost	**(number of units) x (price per unit)** E.g. If asked to find the total cost of 80 shirts valued at $10.99 each: 80 x 10.99 = $879.20.

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