COMMON MATH FORMULAS

AREA(A)	Square	$A = s^2$;	where s = any side of the square
	Rectangle	$A = lw$;	where l = length and w = width
	Parallelogram	$A = bh$;	where b = base and h = height
	Triangle	$A = 1/2bh$;	where b = base and h = height
	Circle	$A = \pi r^2$;	where π= 3.14 and r = radius
	Trapezoid	$A = 1/2\ (b1 + b2)\ h$;	
	Sphere	$S = 4\pi r^2$	where s= Surface area

SURFACE AREA (SA)of a:	cube	SA = $6s^2$	where s = any side
	cylinder (lateral)	$SA = 2\pi rh$;	where π=3.14, r = radius, and h = height

PERIMETER (P) of a	Square	$P = 4s;$	where s = any side
	Rectangle	$P = 2l + 2w;$	where l = length and w = width
	Triangle	$P = s1 + s2 + s3;$	where s = a side
	Any shape	P = the length of all sides added together	
	Circle (Circumference)	$C = \pi d;$	where π= 3.14 and d = diameter

VOLUME (V) of a	Cube	$V = S^3;$	where S = any side
	Rectangular Container	$V = lwh;$	where l = length, w = width, and h = height
	Square Pyramid	$V = 1/3(b)^2h;$	where b = base length, h = height,
	Cylinder	$V = \pi r^2 h;$	where π= 3.14, r = radius, and h = height
	Cone	$V = 1/3\pi r^2 h;$	where π= 3.14, r = radius, and h = height
	Sphere	$V = \frac{4}{3}\pi r^3$	where r=radius, v = volume
	Right Circular Cylinder	$V = \pi r^2 h$	where r= radius, v=volume, h = height

FORMULAS/EQUATIONS

Distance between two points	$d = \sqrt{(x2 - x1)^2 + (y2 - y1)^2}$	where (x1,y1) and (x2,y2) are two points on a coordinate plane
Slope of a line	$m = \frac{y2 - y}{x2 - x1}$	where (x1,y1) and (x2,y2) are two points on a coordinate plane
Quadratic Equation	$ax^2 + bx + c = 0$	Where *a* and *b* are coefficients and c is constant
Standard Equation of a circle	$(x - h)^2 + (y - k)^2 = r^2$	Where r is the radius and (h, k) is the center
Quadratic formula		Where *a* and *b* are coefficients and c is constant

	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$	
Standard Equation of a circle	$(x-h)^2 + (y-k)^2 = r^2$	Where r is the radius and center at (h, k)
Point-Slope Equation of a line	$y - y_1 = m(x - x_1)$	Where m is the slope and the point (x_1, y_1)
Slope-Intercept Equation of a line	$y = mx + b$	Where m is the slope and b is the y-intercept

PYTHAGOREAN THEOREM

$a^2 + b^2 = c^2$ where a and b are legs, and c is the hypotenuse, of a right triangle

CENTRAL TENDENCY

Mean	(x1 + x2 + ... x?) / N	Where the x's are the values for the desired mean, and N is the number of values involved
Median	(if odd number of values)	arrange values in numeric order, then choose the value in the middle
	(if even number of values)	arrange values in numeric order, then add the two middle values and divide by 2
Mode		the value that appears most often
Range		subtract the lowest value from the highest value

MISCELLANEOUS FORMULAS

Simple Interest	$I = prt$	where I = interest, p = principal, r = interest rate, and t = time
Distance	$d = rt$	where d = distance, r = rate, and t = time
Total Cost	(Number of Units) x (Price per Unit)	

OTHER ALGEBRAIC RULES & SPECIAL PRODUCT

Product Rule	$a^n \times a^m = a^{n+m}$	where a is the base $n \; and \; m$ are the exponents
Power Rule	$(a^n)^m = a^{nm}$	where a is the base $n \; and \; m$ are the exponents
Quotient Rule	$\frac{a^n}{a^m} = a^{n-m}$	where a is the base $n \; and \; m$ are the exponents
Negative exponent	$a^{-n} = \frac{1}{a^n}$	where d = distance, r = rate, and t = time
Total Cost	(Number of Units) x (Price per Unit)	