Grades 9-10 FCAT Mathematics Reference Sheet

		Area
	Triangle	$A = 1/2\ bh$
	Rectangle	$A = lw$
	Trapezoid	$A = 1/2\ h\ (b_1 + b_2)$
	Parallelogram	$A = bh$
	Circle	$A = \pi r^2$

KEY	
b = base	d= diameter
h = height	r = radius
l = length	A = area
w = width	C = circumference
ℓ = slant height	V = volume
S.A. = Surface area	
Use 3.14 or 22/7 for π	

Circumference

$C = \pi d = 2\pi r$

		Volume	Total Surface Area
	Right Circular Cone	$V = 1/3\ \pi r^2 h$	$S.A. = 1/2\ (2\pi r)\ell + \pi r^2 = \pi r\ell + \pi r^2$
	Square Pyramid	$V = 1/3\ lwh$	$S.A. = 4\ (1/2\ l\ell) + l^2 = 2l\ell + l^2$
	Sphere	$V = 4/3\ \pi r^3$	$S.A. = 4\pi r^2$
	Right Circular Cylinder	$V = \pi r^2 h$	$S.A. = 2\pi rh + 2\pi r^2$
	Rectangular Solid	$V = lwh$	$S.A. = 2(lw) + 2(hw) + 2(lh)$

In the following formulas, n represents the number of sides.

In a polygon, the sum of the measures of the interior angles is equal to $180(n - 2)$.

In a regular polygon, the measure of an interior angle is equal to $[180(n - 2)] / n$.

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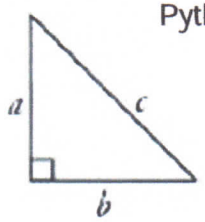
Pythagorean theorem:  $c^2 = a^2 + b^2$	Distance between two points $P_1 (x_1,y_1)$ and $P_2 (x_2,y_2)$: $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
$y = mx + b$ Slope-intercept form of an equation of a line, where m = slope and b = the y-intercept:	Midpoint between two points $P_1 (x_1,y_1)$ and $P_2 (x_2,y_2)$: $\left(\frac{X_1 + X_2}{2}, \frac{y_1 + y_2}{2}\right)$
$d = rt$ Distance, rate, time formula, where d = distance, r = rate, t = time.	$I = prt$ Simple interest formula, where p = principal, r = rate, t = time.

Conversions

1 yard = 3 feet = 36 inches
1 mile = 1,760 yards = 5,280 feet
1 acre = 43,560 square feet
1 hour = 60 minutes
1 minute = 60 seconds

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts

1 liter = 1000 milliliters = 1000 cubic centimeters
1 meter = 100 centimeters = 1000 millimeters
1 kilometer = 1000 meters
1 gram = 1000 milligrams
1 kilogram = 1000 grams

1 pound = 16 ounces
1 ton = 2,000 pounds

Metric numbers with four digits are represented without a comma (e.g., 9960 kilometers). For metric number greater than four digits, a space is used instead of a comma (e.g., 12 500 liters).