

Grades 6–8 FCAT 2.0 Mathematics Reference Sheet

Area





Rectangle	$A = bh$
Parallelogram	$A = bh$
Triangle	$A = \frac{1}{2}bh$
Trapezoid	$A = \frac{1}{2}h(b_1 + b_2)$
Circle	$A = \pi r^2$

KEY	
b = base	A = area
h = height	B = area of base
w = width	C = circumference
d = diameter	V = volume
r = radius	P = perimeter of base
ℓ = slant height	$S.A.$ = surface area
Use 3.14 or $\frac{22}{7}$ for π .	

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

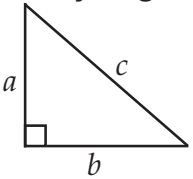
Volume/Capacity

Total Surface Area

	Rectangular Prism	$V = bwh$ or $V = Bh$	$S.A. = 2bh + 2bw + 2hw$ or $S.A. = Ph + 2B$
	Right Circular Cylinder	$V = \pi r^2h$ or $V = Bh$	$S.A. = 2\pi rh + 2\pi r^2$ or $S.A. = 2\pi rh + 2B$
	Right Square Pyramid	$V = \frac{1}{3}Bh$	$S.A. = \frac{1}{2}P\ell + B$
	Right Circular Cone	$V = \frac{1}{3}\pi r^2h$ or $V = \frac{1}{3}Bh$	$S.A. = \frac{1}{2}(2\pi r)\ell + B$

Sum of the measures of the interior angles of a polygon = $180(n - 2)$
Measure of an interior angle of a regular polygon = $\frac{180(n - 2)}{n}$
where: n represents the number of sides

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<p style="text-align: center;">Pythagorean theorem</p> <div style="display: flex; align-items: center; justify-content: center;">  <div style="margin-left: 20px;"> $a^2 + b^2 = c^2$ </div> </div>	<p style="text-align: center;">Simple interest formula</p> $I = prt$ <p style="text-align: center;">where p = principal, r = rate, t = time</p>
<p style="text-align: center;">Slope-intercept form of a linear equation</p> $y = mx + b$ <p style="text-align: center;">where m = slope and b = y-intercept</p>	<p style="text-align: center;">Distance, rate, time formula</p> $d = rt$ <p style="text-align: center;">where d = distance, r = rate, t = time</p>
<p>Conversions within a System of Measure</p>	
1 yard = 3 feet 1 mile = 1,760 yards = 5,280 feet 1 acre = 43,560 square feet 1 cup = 8 fluid ounces 1 pint = 2 cups 1 quart = 2 pints 1 gallon = 4 quarts 1 pound = 16 ounces 1 ton = 2,000 pounds	1 meter = 100 centimeters = 1000 millimeters 1 kilometer = 1000 meters 1 liter = 1000 milliliters = 1000 cubic centimeters 1 gram = 1000 milligrams 1 kilogram = 1000 grams 1 minute = 60 seconds 1 hour = 60 minutes 1 year = 52 weeks = 365 days
<p>Conversions between Systems of Measure</p>	
<p>When converting from Customary to Metric, use these approximations.</p>	
1 inch = 2.54 centimeters 1 foot = 0.305 meter 1 mile = 1.61 kilometers	1 cup = 0.24 liter 1 gallon = 3.785 liters 1 ounce = 28.35 grams 1 pound = 0.454 kilogram
<p>When converting from Metric to Customary, use these approximations.</p>	
1 centimeter = 0.39 inch 1 meter = 3.28 feet 1 kilometer = 0.62 mile	1 liter = 4.23 cups 1 liter = 0.264 gallon 1 gram = 0.0352 ounce 1 kilogram = 2.204 pounds
<p>Temperature conversions between Celsius and Fahrenheit</p> $^{\circ}\text{C} = (^{\circ}\text{F} - 32) \div 1.8$ $^{\circ}\text{F} = (^{\circ}\text{C} \times 1.8) + 32$	