

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

$$C = \pi d \quad \text{or} \quad C = 2\pi r$$

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	$V = \pi r^2 h$ or $V = Bh$	$S.A. = 2\pi r h + 2\pi r^2$ or $S.A. = 2\pi r h + 2B$
	Right Square Pyramid	$V = \frac{1}{3}Bh$	$S.A. = \frac{1}{2}P\ell + B$
	Right Circular Cone	$V = \frac{1}{3}\pi r^2 h$ or $V = \frac{1}{3}Bh$	$S.A. = \frac{1}{2}(2\pi r)\ell + B$

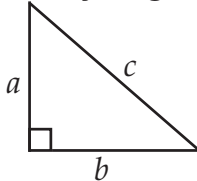
Sum of the measures of the interior angles of a polygon = $180(n - 2)$

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>Pythagorean theorem</p>  $a^2 + b^2 = c^2$	<p>Simple interest formula</p> $I = prt$ <p>where p = principal, r = rate, t = time</p>
<p>Slope-intercept form of a linear equation</p> $y = mx + b$ <p>where m = slope and b = y-intercept</p>	<p>Distance, rate, time formula</p> $d = rt$ <p>where d = distance, r = rate, t = time</p>

Conversions within a System of Measure

1 yard = 3 feet	1 meter = 100 centimeters = 1000 millimeters
1 mile = 1,760 yards = 5,280 feet	1 kilometer = 1000 meters
1 acre = 43,560 square feet	
	1 liter = 1000 milliliters = 1000 cubic centimeters
1 cup = 8 fluid ounces	1 gram = 1000 milligrams
1 pint = 2 cups	1 kilogram = 1000 grams
1 quart = 2 pints	
1 gallon = 4 quarts	1 minute = 60 seconds
1 pound = 16 ounces	1 hour = 60 minutes
1 ton = 2,000 pounds	1 year = 52 weeks = 365 days

Conversions between Systems of Measure

When converting from Customary to Metric, use these approximations.

1 inch = 2.54 centimeters	1 cup = 0.24 liter
1 foot = 0.305 meter	1 gallon = 3.785 liters
1 mile = 1.61 kilometers	1 ounce = 28.35 grams
	1 pound = 0.454 kilogram

When converting from Metric to Customary, use these approximations.

1 centimeter = 0.39 inch	1 liter = 4.23 cups
1 meter = 3.28 feet	1 liter = 0.264 gallon
1 kilometer = 0.62 mile	1 gram = 0.0352 ounce
	1 kilogram = 2.204 pounds

Temperature conversions between Celsius and Fahrenheit

$$^{\circ}\text{C} = (^{\circ}\text{F} - 32) \div 1.8$$

$$^{\circ}\text{F} = (^{\circ}\text{C} \times 1.8) + 32$$