

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

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|-----------------------|-------------------------|
| 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 |


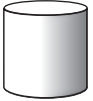


Use 3.14 or $\frac{22}{7}$ for π .

Circumference

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

Volume/Capacity

Total Surface Area

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|  | 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 $V = \frac{1}{3}Bh$ | $S.A. = \frac{1}{2}(2\pi r)\ell + B$ |

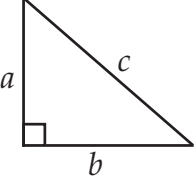
Sum of the measures of the interior angles of a polygon = $180(n - 2)$

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> |

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| <p>Conversions within a System of Measure</p> | |
| <p>1 yard = 3 feet 1 mile = 1,760 yards = 5,280 feet 1 acre = 43,560 square feet</p> | <p>1 meter = 100 centimeters = 1000 millimeters 1 kilometer = 1000 meters</p> |
| <p>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</p> | <p>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> |

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| <p>Conversions between Systems of Measure</p> | |
| <p>When converting from Customary to Metric, use these approximations.</p> | |
| <p>1 inch = 2.54 centimeters 1 foot = 0.305 meter 1 mile = 1.61 kilometers</p> | <p>1 cup = 0.24 liter 1 gallon = 3.785 liters 1 ounce = 28.35 grams 1 pound = 0.454 kilogram</p> |
| <p>When converting from Metric to Customary, use these approximations.</p> | |
| <p>1 centimeter = 0.39 inch 1 meter = 3.28 feet 1 kilometer = 0.62 mile</p> | <p>1 liter = 4.23 cups 1 liter = 0.264 gallon 1 gram = 0.0352 ounce 1 kilogram = 2.204 pounds</p> |

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| <p>Temperature conversions between Celsius and Fahrenheit</p> |
| $^{\circ}\text{C} = (^{\circ}\text{F} - 32) \div 1.8$ $^{\circ}\text{F} = (^{\circ}\text{C} \times 1.8) + 32$ |