

Grade 7 FAST Mathematics Reference Sheet

Conversions within a System of Measure

Customary Conversions

1 foot = 12 inches
 1 yard = 3 feet
 1 mile = 5,280 feet
 1 mile = 1,760 yards

 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

Metric Conversions

1 meter = 100 centimeters
 1 meter = 1000 millimeters
 1 kilometer = 1000 meters

 1 liter = 1000 milliliters

 1 gram = 1000 milligrams
 1 kilogram = 1000 grams

Time Conversions

1 minute = 60 seconds
 1 hour = 60 minutes
 1 day = 24 hours
 1 week = 7 days
 1 year = 365 days
 1 year = 52 weeks

Conversions between Systems of Measure

Customary to Metric Conversion Approximations

1 inch = 2.54 centimeters
 1 foot = 0.305 meters
 1 mile = 1.61 kilometers

 1 cup = 0.24 liters
 1 gallon = 3.785 liters
 1 ounce = 28.35 grams
 1 pound = 0.454 kilograms

Metric to Customary Conversion Approximations

1 centimeter = 0.39 inches
 1 meter = 3.28 feet
 1 kilometer = 0.62 miles

 1 liter = 4.23 cups
 1 liter = 0.264 gallons
 1 gram = 0.0352 ounces
 1 kilogram = 2.204 pounds

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Formulas

Parallelogram $A = bh$

Or Rhombus $A = lw$

Trapezoid $A = \frac{1}{2}h(b_1 + b_2)$

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

$$A = \pi r^2$$

Right Circular Cylinder $V = Bh$ or $V = \pi r^2 h$

Key

b = base

h = height

l = length

w = width

r = radius

d = diameter

B = area of base

A = area

C = circumference

V = volume

Simple Interest Formula

$$I = prt$$

where I = interest, p = principal,
 r = rate, t = time

Percent Error Formula

$$\frac{|Estimate - Actual|}{Actual} \times 100$$

Percent of Change

$$\frac{final\ value - initial\ value}{initial\ value} \times 100$$