

Massachusetts Comprehensive Assessment System Grade 7 Mathematics Reference Sheet

CONVERSIONS

- 1 cup = 8 fluid ounces
- 1 pint = 2 cups
- 1 quart = 2 pints
- 1 gallon = 4 quarts
- 1 gallon \approx 3.785 liters
- 1 liter \approx 0.264 gallon
- 1 liter = 1000 cubic centimeters

- 1 inch = 2.54 centimeters
 - 1 meter \approx 39.37 inches
 - 1 mile = 5280 feet
 - 1 mile = 1760 yards
 - 1 mile \approx 1.609 kilometers
 - 1 kilometer ≈ 0.62 mile

- 1 pound = 16 ounces
- 1 pound \approx 0.454 kilogram
- 1 kilogram \approx 2.2 pounds
- 1 ton = 2000 pounds

AREA (A) FORMULAS

VOLUME (V) FORMULAS

square $A = s^2$
rectangle $A = bh$
OR
A = /w
parallelogram $A = bh$
triangle $A = \frac{1}{2}bh$
trapezoid $A = \frac{1}{2}h(b_1 + b_2)$
circle $A = \pi r^2$

cube $V = s^3$ (s = length of an edge)

right prism $\ldots \ldots V = Bh$

TOTAL SURFACE AREA (SA) FORMULAS

right rectangular prism . . SA = 2(lw) + 2(hw) + 2(lh)

CIRCLE FORMULAS

area $A = \pi r^2$ circumference. $C = 2\pi r$ OR $C = \pi d$