Work Ready Math Formulas

UNITS OF MEASUREMENT

Distance

1 foot = 12 inches
1 yard = 3 feet
1 mile = 5280 feet
1 mile ≈ 1.61 kilometers
1 inch = 2.540 centimeters
1 foot = 0.3048 meters
1 meter = 100 centimeters
1 meter = 1,000 millimeters
1 kilometer = 1,000 meters
1 kilometer ≈ 0.62 miles

Area

1 square foot = 144 square inches
1 square yard = 9 square feet
1 acre = 43,560 square feet

Volume

1 tablespoon = 3 teaspoons
1 cup = 16 tablespoons
1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 quart = 4 cups
1 gallon = 4 quarts
1 gallon = 231 cubic inches
1 liter ≈ 0.264 gallons
1 cubic foot = 1,728 cubic inches
1 cubic yard = 27 cubic feet
1 board foot = 1 inch by 12 inches by 12 inches

Mass/Weight

1 ounce ≈ 28.350 grams
1 pound = 16 ounces
1 pound ≈ 453.592 grams
1 milligram = 0.001 grams
1 kilogram = 1,000 grams
1 kilogram ≈ 2.2 pounds
1 ton = 2,000 pounds

Time

1 minute (min) = 60 seconds (sec)
1 hour (hr) = 60 minutes (min)
1 day = 24 hours (hr)
1 week (wk) = 7 days

FORMULAS

Pi (π)

$\pi \approx 3.14$

Square

perimeter = 4(***side***)

area = $(\textbf{\textit{side}})^2$

Rectangle

perimeter = 2(***length*** + ***width***)

area = ***length*** x ***width***

Cube

volume = $(\textbf{\textit{length of side}})^3$

Rectangular Prism

volume = ***length x width x height***

Triangle

sum of angles = 180˚

area = ½ (***base*** x ***height***)

Circle

degrees in a circle = 360˚

circumference ≈ 3.14 x ***diameter***

area ≈ 3.14 x $(\textbf{\textit{radius}})^2$

Cylinder

volume ≈ 3.14 x $(\textbf{\textit{radius}})^2$ x ***height***

Cone

$$\text{volume} \approx \frac{3.14 \times (\textbf{\textit{radius}})^2 \times \textbf{\textit{height}}}{3}$$

Sphere

volume ≈ ⅓ x 3.14 x $(\textbf{\textit{radius}})^3$

Amperage

amps = watts / volts

Electricity

1 kilowatt-hour = 1,000 watt-hours

Temperature

°C = 0.56(°F - 32) *or* $^5/_9$ (°F - 32)

°F= 1.8(°C) + 32 *or* ($^9/_5$ x °C) + 32