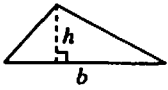
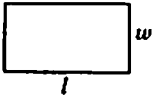


Mathematical Formulas

Use $\pi \approx 3.14$

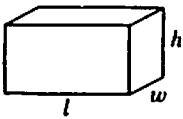


Area of triangle = $\frac{1}{2}bh$



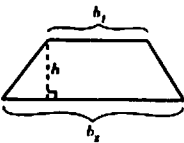
Perimeter of a rectangle = $2l + 2w$

Area of rectangle = lw

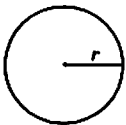


Surface Area of a rectangular solid = $2(lw + lh + wh)$

Volume of a rectangular solid = lwh



Area of a trapezoid = $\frac{1}{2}h(b_1 + b_2)$



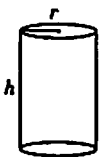
Area of a circle = πr^2

Circumference of a circle = $2\pi r$ or πd



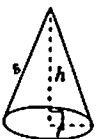
Volume of a sphere = $\frac{4}{3}\pi r^3$

Surface Area of a sphere = $4\pi r^2$



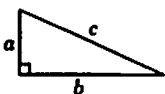
Volume of a right cylinder = $\pi r^2 h$

Surface Area of a right cylinder = $2\pi r h + 2\pi r^2$



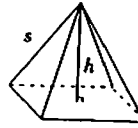
Volume of a cone = $\frac{1}{3}\pi r^2 h$

Surface Area of a cone = $\pi r^2 + \pi r s$



The Pythagorean Theorem:

$a^2 + b^2 = c^2$



Volume of a regular pyramid = $\frac{1}{3}Bh$
(Rectangular pyramid is shown)

Surface Area of a regular pyramid = $\frac{1}{2}Ps + B$

Where B is area of base
Where P is perimeter of base
Where h is height
Where s is slant height

Given points: (x_1, y_1) and (x_2, y_2)

Midpoint formula = $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$

Slope of a line = $\frac{y_2 - y_1}{x_2 - x_1}$
(Given two points)

Distance between two points $d = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$

The Quadratic Formula

Let a, b and c be real numbers such that $a \neq 0$.
The solutions of the quadratic equation
 $ax^2 + bx + c = 0$ are

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$\text{sine } \theta = \frac{\text{length of the side opposite of } \theta}{\text{length of the hypotenuse}}$

$\text{cosine } \theta = \frac{\text{length of the side adjacent to } \theta}{\text{length of the hypotenuse}}$

$\text{tangent } \theta = \frac{\text{length of the side opposite of } \theta}{\text{length of the side adjacent to } \theta}$

Distance formula: distance = rate \times time

Simple interest:

interest = principal \times rate \times time (in years)