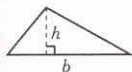
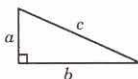


Mathematical Formulas

Use $\pi \approx 3.14$



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



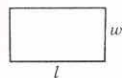
Pythagorean Theorem:

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



Perimeter of a square = $4s$

Area of a square = s^2



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

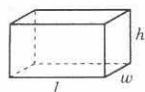
Area of a rectangle = lw



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

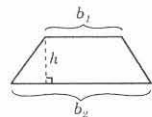
Surface Area of a regular pyramid = $\frac{1}{2}Ps + B$

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



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

Volume of a rectangular solid = lwh



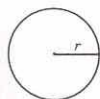
Area of a trapezoid = $\frac{1}{2}h(b_1 + b_2)$

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 = $\frac{y_2 - y_1}{x_2 - x_1}$

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



Area of a circle = πr^2

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

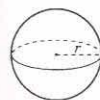
The Quadratic Formula

Let a , b , and c be real numbers such that $a \neq 0$.

The solutions of the quadratic equation

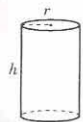
$$ax^2 + bx + c = 0$$
 are

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



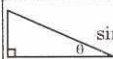
Volume of a sphere = $\frac{4}{3}\pi r^3$

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



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

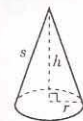
Surface Area of a right cylinder = $2\pi r^2 + 2\pi rh$



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

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

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



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

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

Distance formula: distance = rate \times time

Simple interest:

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