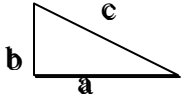


## Writing equations

These are the formulas you must know

Equation of a circle  $(x - h)^2 + (y - k)^2 = r^2$   $r$  is the radius and  $(h, k)$  is the center



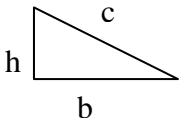
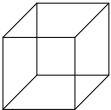
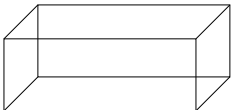

Distance of a line segment  $(x_1, y_1)$  and  $(x_2, y_2)$  is  $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$



Pythagorean theorem (On a right triangle)  $c^2 = a^2 + b^2$

$$c = \sqrt{a^2 + b^2}$$

$$b = \sqrt{c^2 - a^2}$$

Shape	image	Area	Perimeter
Square		$A = s^2$	$P = 4s$
Rectangle		$A = Lw$	$P = 2L + 2w$
Rt. Triangle		$A = \frac{1}{2}bh$	$P = h + b + c$
Circle		$A = \pi r^2$	$C = 2\pi r$
Cube		$V = s^3$	$SurfaceArea = 6s^2$
Box		$V = Lwh$	$SurfaceArea = 2Lw + 2Lh + 2wh$
Right Cylinder		$V = \pi r^2 h$	$SurfaceArea = 2\pi rh + 2\pi r^2$