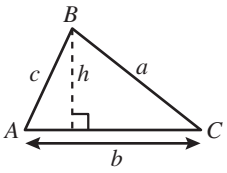
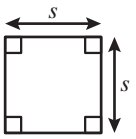
Geometry Formula Sheet
2009 *Mathematics Standards of Learning*

Geometric Formulas



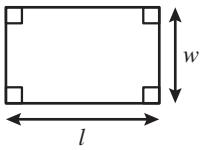
$A = \frac{1}{2}bh$

$A = \frac{1}{2}ab \sin C$



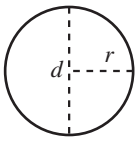
$p = 4s$

$A = s^2$



$p = 2l + 2w$

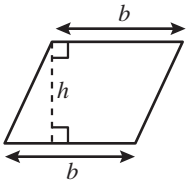
$A = lw$



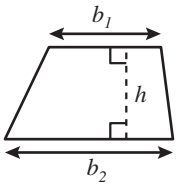
$C = 2\pi r$

$C = \pi d$

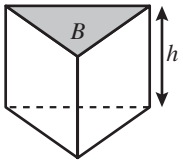
$A = \pi r^2$



$A = bh$



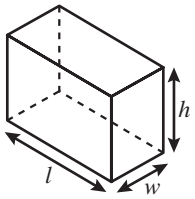
$A = \frac{1}{2}h(b_1 + b_2)$



$V = Bh$

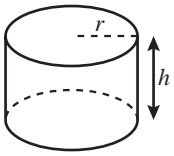
$L.A. = hp$

$S.A. = hp + 2B$



$V = lwh$

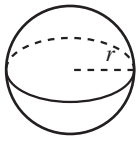
$S.A. = 2lw + 2lh + 2wh$



$V = \pi r^2 h$

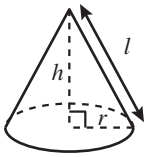
$L.A. = 2\pi rh$

$S.A. = 2\pi r^2 + 2\pi rh$



$V = \frac{4}{3}\pi r^3$

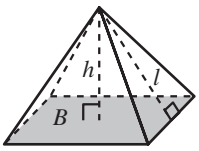
$S.A. = 4\pi r^2$



$V = \frac{1}{3}\pi r^2 h$

$L.A. = \pi rl$

$S.A. = \pi r^2 + \pi rl$



$V = \frac{1}{3}Bh$

$L.A. = \frac{1}{2}lp$

$S.A. = \frac{1}{2}lp + B$

Abbreviations

Area	*A*
Area of Base	*B*
Circumference	*C*
Lateral Area	*L.A.*
Perimeter	*p*
Surface Area	*S.A.*
Volume	*V*

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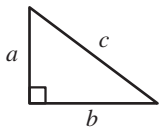
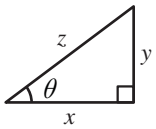


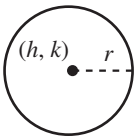
$a^2 + b^2 = c^2$



$\text{Sin } \theta = \frac{y}{z}$

$\text{Cos } \theta = \frac{x}{z}$

$\text{Tan } \theta = \frac{y}{x}$



$(x-h)^2 + (y-k)^2 = r^2$

Pi

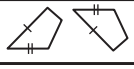
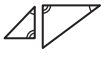
$\pi \approx 3.14$

$\pi \approx \frac{22}{7}$

Quadratic Formula:

$$x = \frac{^{-}b \pm \sqrt{b^2 - 4ac}}{2a}, \text{ where } ax^2 + bx + c = 0 \text{ and } a \neq 0$$

Geometric Symbols

Example	Meaning
$m\angle A$	measure of angle A
AB	length of line segment AB
$\overrightarrow{AB}$	ray AB
	right angle
$\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$	Line AB is parallel to line CD.
$\overline{AB} \perp \overline{CD}$	Line segment AB is perpendicular to line segment CD.
$\angle A \cong \angle B$	Angle A is congruent to angle B.
$\triangle ABC \sim \triangle DEF$	Triangle ABC is similar to triangle DEF.
	Similarly marked segments are congruent.
	Similarly marked angles are congruent.