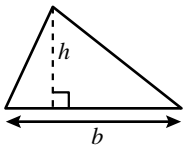
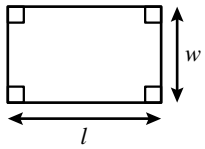
Geometry Formula Sheet
2016 *Mathematics Standards of Learning*

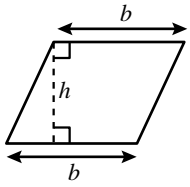
Geometric Formulas



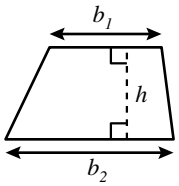
$$A = \frac{1}{2}bh$$



$$p = 2l + 2w$$
$$A = lw$$

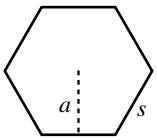


$$A = bh$$

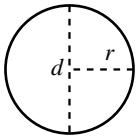


$$A = \frac{1}{2}h(b_1 + b_2)$$

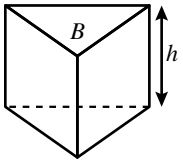
Regular Hexagon



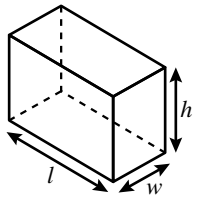
$$A = \frac{3\sqrt{3}}{2}s^2$$
$$A = \frac{1}{2}pa$$



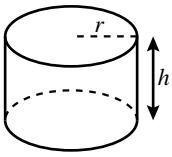
$$C = 2\pi r$$
$$C = \pi d$$
$$A = \pi r^2$$



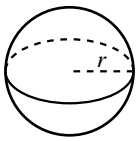
$$V = Bh$$
$$L.A. = hp$$
$$S.A. = hp + 2B$$



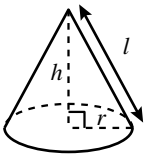
$$V = lwh$$
$$S.A. = 2lw + 2lh + 2wh$$



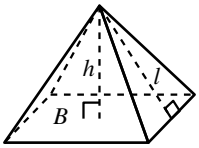
$$V = \pi r^2 h$$
$$L.A. = 2\pi rh$$
$$S.A. = 2\pi r^2 + 2\pi rh$$



$$V = \frac{4}{3}\pi r^3$$
$$S.A. = 4\pi r^2$$



$$V = \frac{1}{3}\pi r^2 h$$
$$L.A. = \pi rl$$
$$S.A. = \pi r^2 + \pi rl$$



$$V = \frac{1}{3}Bh$$
$$L.A. = \frac{1}{2}lp$$
$$S.A. = \frac{1}{2}lp + B$$

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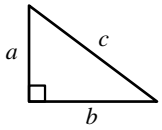
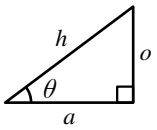
Geometric Formulas



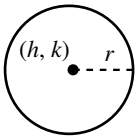
$$a^2 + b^2 = c^2$$



$$\text{Sin } \theta = \frac{o}{h}$$

$$\text{Cos } \theta = \frac{a}{h}$$

$$\text{Tan } \theta = \frac{o}{a}$$



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

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
$\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$	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.

Abbreviations

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