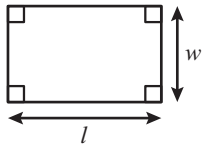


# Geometry Formula Sheet

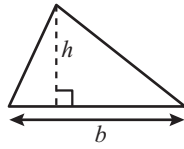
## 2023 Mathematics Standards of Learning

### Geometric Formulas

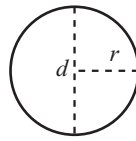


$$p = 2l + 2w$$

$$A = lw$$



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

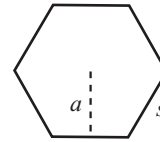


$$C = 2\pi r$$

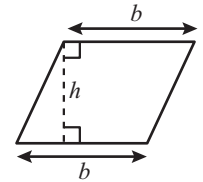
$$C = \pi d$$

$$A = \pi r^2$$

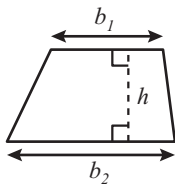
#### Regular Polygon



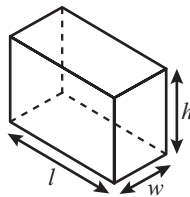
$$A = \frac{1}{2}pa$$



$$A = bh$$

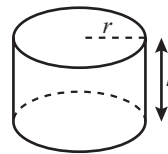


$$A = \frac{1}{2}h(b_1 + b_2)$$



$$V = lwh$$

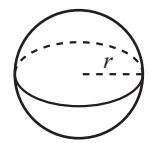
$$S.A. = 2lw + 2lh + 2wh$$



$$V = \pi r^2 h$$

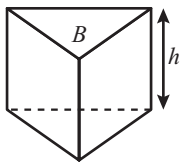
$$L.A. = 2\pi r h$$

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



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

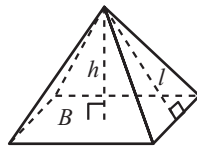
$$S.A. = 4\pi r^2$$



$$V = Bh$$

$$L.A. = hp$$

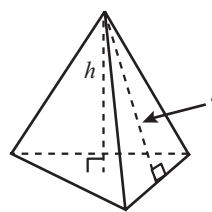
$$S.A. = hp + 2B$$



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

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

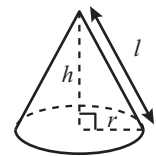
$$S.A. = \frac{1}{2}lp + B$$



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

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

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



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

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

$$L.A. = \pi r l$$

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

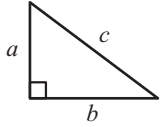
#### Abbreviations

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

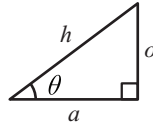
# Geometry Formula Sheet

## 2023 Mathematics Standards of Learning

### Geometric Formulas



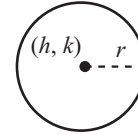
$$a^2 + b^2 = c^2$$



$$\sin \theta = \frac{o}{h}$$

$$\cos \theta = \frac{a}{h}$$

$$\tan \theta = \frac{o}{a}$$



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

### Geometric Symbols

| Example   | Meaning   |
|---|---|
| $m\angle A$   | measure of angle $A$                                      |
| $AB$  | length of line segment $AB$                               |
| $\overrightarrow{AB}$                               | ray $AB$  |
| $\overrightarrow{AB} \parallel \overrightarrow{CD}$ | 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 $DEF$ .             |

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