

# Unit 16 Facts

## Formulas

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**Parallelogram:**  $A = bh$

**Rectangle:**  $A = bh$  or  $A = lw$

**Triangle:**  $A = \frac{1}{2}(bh)$  or

$$A = \sqrt{s(s-a)(s-b)(s-c)}$$

**Rhombus & Kite:**  $A = \frac{1}{2}(d_1d_2)$

**Trapezoid:**  $A = \frac{1}{2}(b_1+b_2)h$  or

$$A = (\text{median})(\text{height})$$

**Circle:**  $C = \pi d$      $A = \pi r^2$

**Regular Polygon:**  $A = \frac{1}{2}(P)(a)$

## Prisms:

- **Lateral Area:**  $LA = Ph$  or  
*add areas of all lateral faces*
- **Total Area:**  $TA = Ph + 2B$  or  
*add areas of all faces*
- **Volume:**  $V = Bh$

## Cylinders:

- **Lateral Area:**  $LA = 2\pi r h$
- **Total Area:**  $TA = 2\pi r h + 2\pi r^2$
- **Volume:**  $V = Bh$  or  $V = \pi r^2 h$

## Pyramids:

- **Lateral Area:**  $LA = \frac{1}{2}Pl$  or  
*add areas of all lateral faces*
- **Total Area:**  $TA = \frac{1}{2}Pl + B$  or  
*add areas of all faces*
- **Volume:**  $V = \frac{1}{3}Bh$

## Cones:

- **Lateral Area:**  $LA = \pi rl$
- **Total Area:**  $TA = \pi rl + \pi r^2$
- **Volume:**  $V = \frac{1}{3}Bh$  or  $V = \frac{1}{3}\pi r^2 h$

## Spheres:

- **Surface Area:**  $S = 4\pi r^2$
- **Volume:**  $V = \frac{4}{3}\pi r^3$