



NOVA SOUTHEASTERN  
UNIVERSITY

College of Undergraduate Studies

## Tutoring and Testing Center

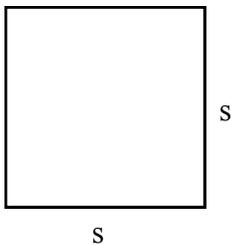
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# AREA AND VOLUME FORMULAS

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### Areas of Plane Figures

*Square*



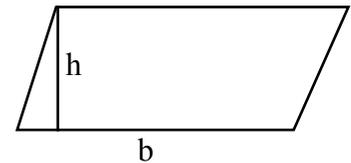
$$A = s^2$$

*Rectangle*



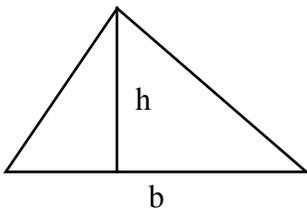
$$A = l \cdot w$$

*Parallelogram*



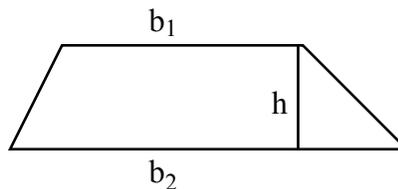
$$A = b \cdot h$$

*Triangle*



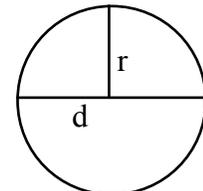
$$A = \frac{1}{2} b \cdot h$$

*Trapezoid*



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

*Circle*



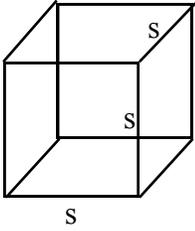
$$A = \pi r^2 \quad (\pi \approx 3.14 \text{ or } )$$

$$\text{Circumference: } C = 2\pi r = \pi d$$

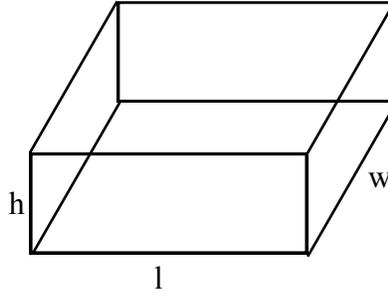
### Volumes of Solid Figures

*Cube*

*Rectangular Solid*



$$V = s^3$$

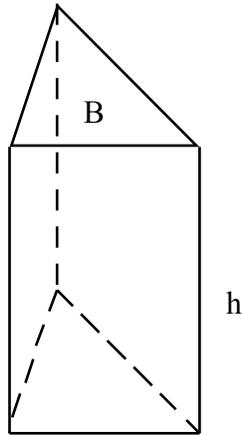


$$V = l \cdot w \cdot h$$

**Prism**

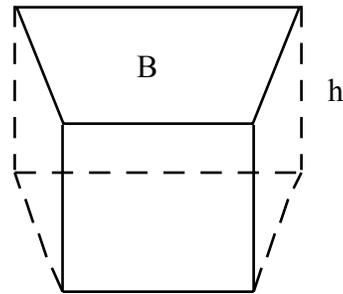
$$\text{Surface Area} = 2(l \cdot w) + 2(l \cdot h) + 2(w \cdot h)$$

**Triangular Prism**



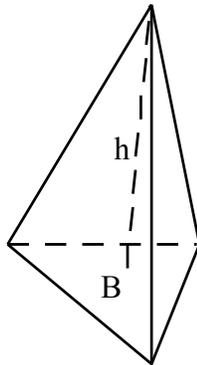
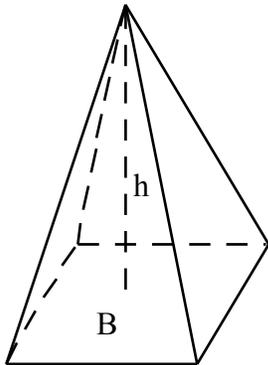
$$V = B \cdot h, \text{ where } B = \text{area of base}$$

**Trapezoidal Prism**



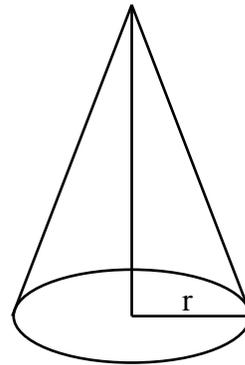
**Pyramid**

Rectangular Pyramid    Triangular Pyramid



$$V = \frac{1}{3} B \cdot h, \text{ where } B = \text{area of base}$$

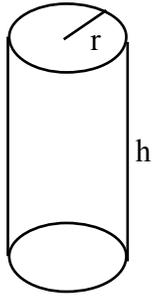
**Cone**



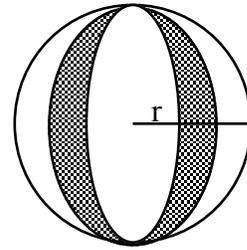
$$V = \frac{1}{3} \pi r^2 h$$

**Cylinder**

**Sphere**



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



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