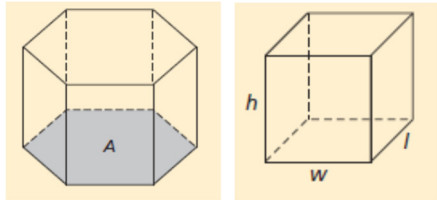
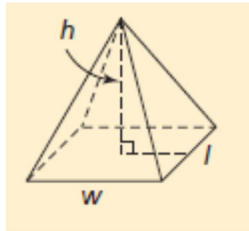


## Lesson Four – Volumes of Right Pyramids and Right Cones



### Volume of a Right Prism

$$V = \text{base area} \times \text{height}$$

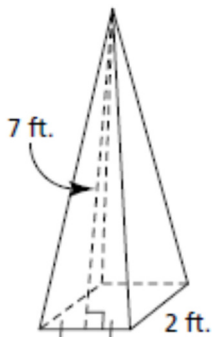


### Volume of a Right Pyramid

$$V = \frac{1}{3} (\text{base area})(\text{height})$$

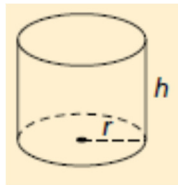
### Example 1

Determine the volume of this right square pyramid, to the nearest cubic foot.



**Example 2**

Determine the volume of a right rectangular pyramid with base dimensions 3.6 m by 4.7 m and a perpendicular height 6.9 m, to the nearest tenth of a cubic metre.

**Volume of a Right Cylinder**

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

Where  $r$  is the radius of the circle and  $h$  is the height of the cylinder

**Example 3**

The volume of a cylinder is  $150 \text{ cm}^3$ . If the height is 10 cm, determine the length of the radius, to the nearest cm.



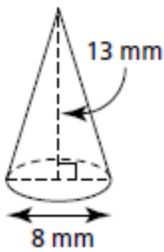
### Volume of a Right Cone

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

Where  $r$  is the radius of the circle, and  $h$  is the height of the cone

#### Example 4

Determine the volume of this cone, to the nearest cubic millimeter.



#### Example 5

A cone has a height of 8 m and a volume of  $300 \text{ m}^3$ . Determine the radius of the base of the cone, to the nearest metre.