

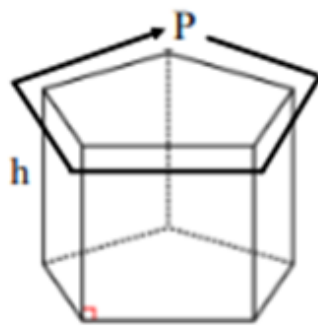
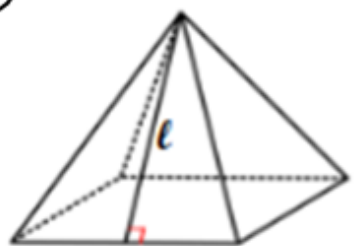
Lesson 12-4  
&  
12-5

# Volume of Prisms, Pyramids, Cylinders and Cones

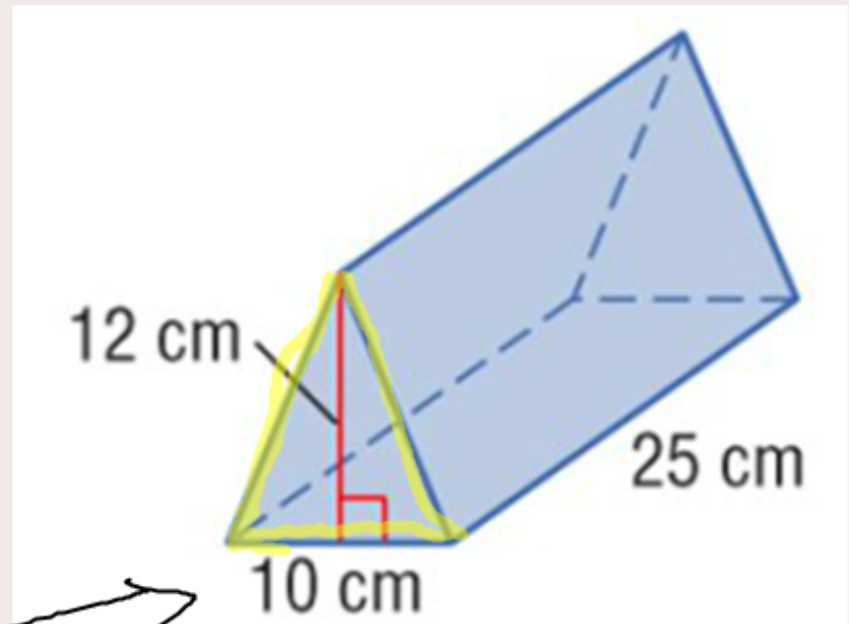


You will be able to find the volume of prisms, cylinders, pyramids and cones

# Volume of Prisms and Pyramids

Solid	Area	Volume
<p>Prism</p> <p><i>2 base</i></p> 	✓	$V = Bh$ <i>area of Base</i> <i>height of Prism</i>
<p>Pyramid</p> <p><i>1 base</i></p> 	✓	$V = \frac{1}{3} Bh$

Find the volume.  
Round to the nearest  
tenth.



$$V = Bh$$

$\frac{1}{2}bh$

$$\frac{1}{2}(10)(12)$$

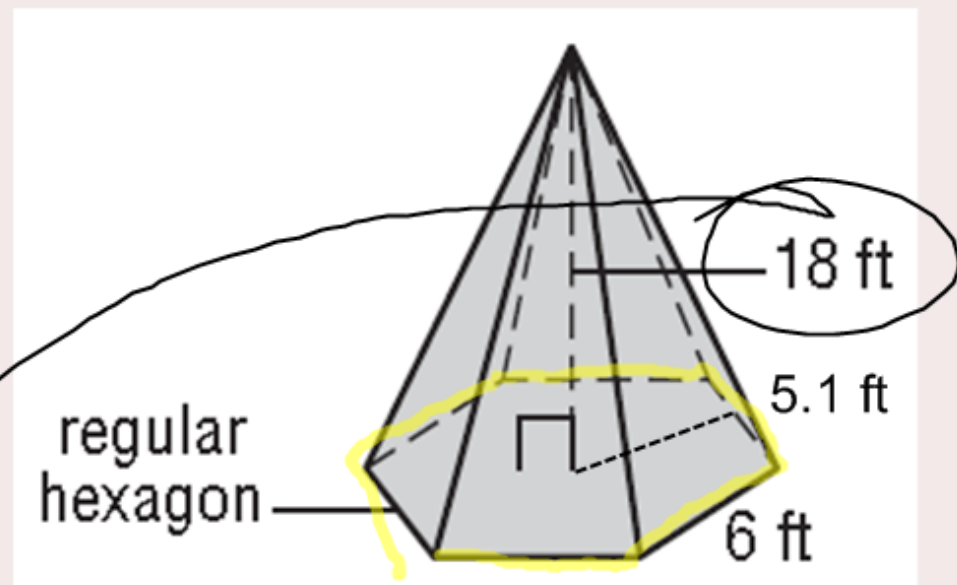
$$V = (60)(25)$$

area  
of  
bas

ht  
of  
prism

$$1500 \text{ cm}^3$$

Find the volume.  
Round to the nearest  
tenth.



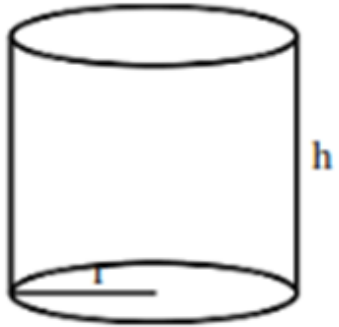
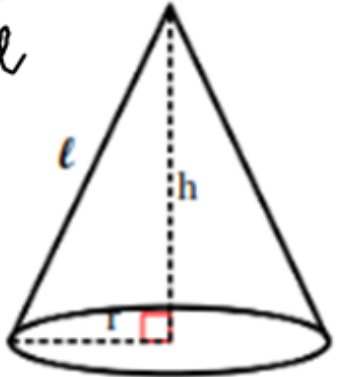
$$V = \frac{1}{3} B h$$

$$\rightarrow B = \frac{1}{2} a p \rightarrow 6(6)$$

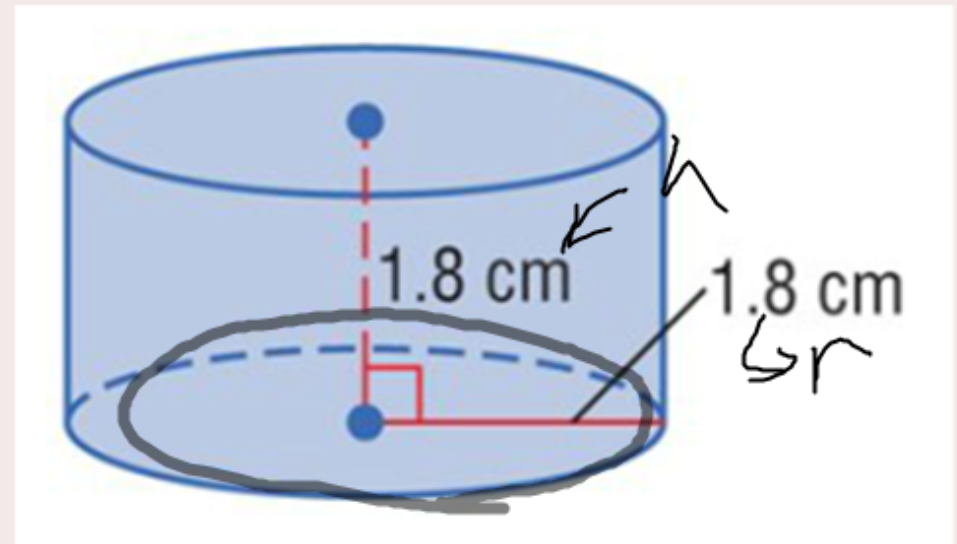
$$B = \frac{1}{2} (5.1) (36)$$

$$V = \frac{1}{3} (91.8) (18) = 550.8 \text{ ft}^3$$

# Volume of Cylinders and Cones

Solid	Area	Volume
<p>Cylinder</p> <p>2 Bases</p> 	$L = 2\pi r h$ ✓	$V = Bh$ or $V = \pi r^2 h$
<p>Cone</p> <p>1 Base</p> 	✓	$V = \frac{1}{3} Bh$ or $V = \frac{1}{3} \pi r^2 h$

Find the volume.  
Round to the nearest  
tenth.



$$V = Bh$$

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

$$V = \pi (1.8)^2 (1.8) =$$

$$V = 18.3 \text{ cm}^3$$

Find the volume.  
Round to the nearest  
tenth.

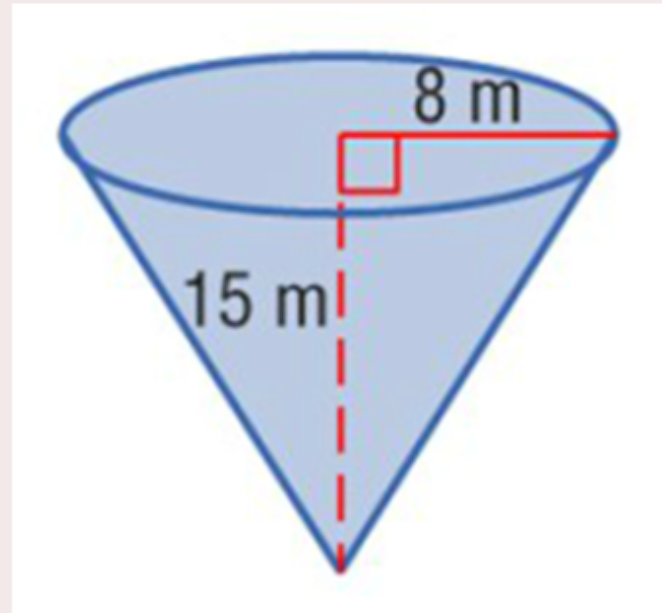
Cone

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

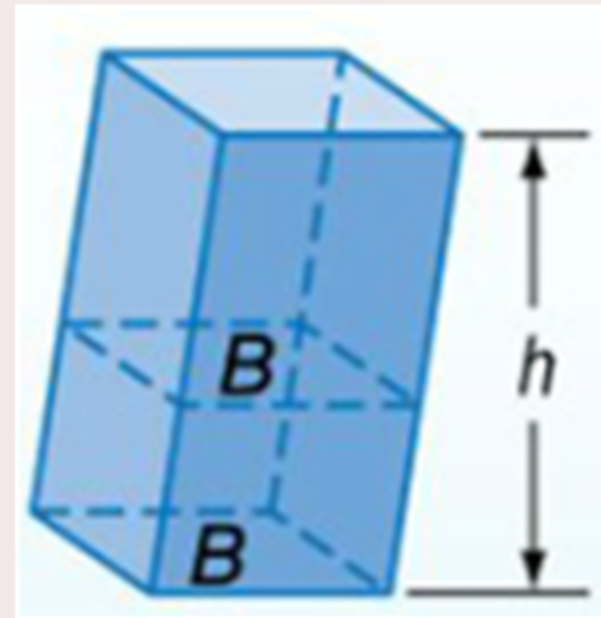
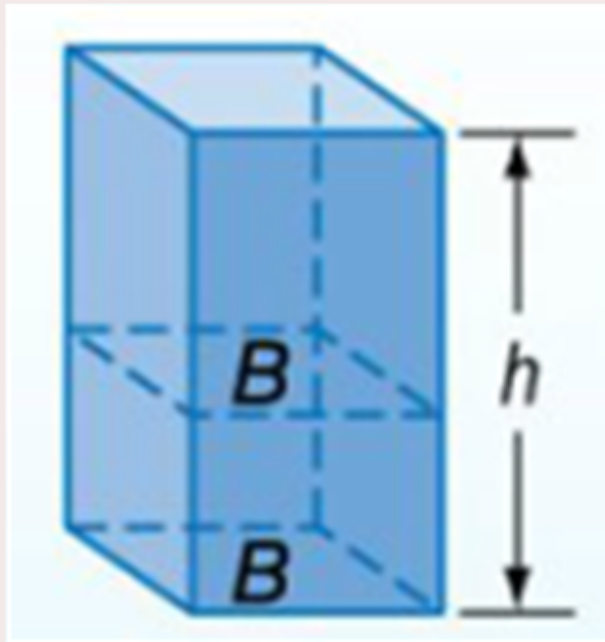
$$V = \frac{1}{3} \pi r^2 h$$

$$V = \frac{1}{3} \pi (8)^2 15$$

$$V = 1005.3 \text{ m}^3$$



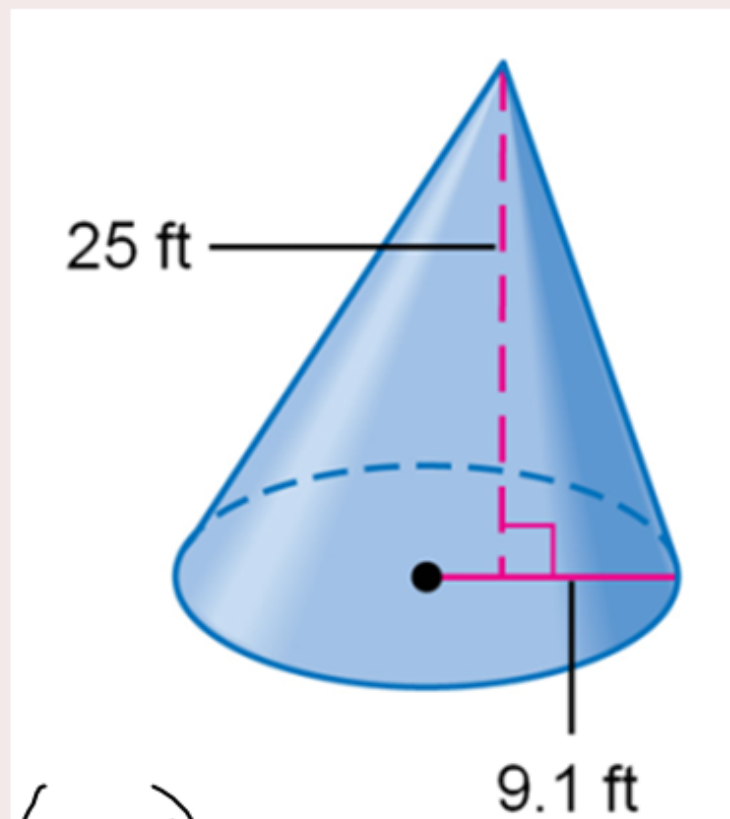
# Volume of an Oblique Solid



$$V = Bh$$



Find the volume of the oblique cone. Round to the nearest tenth.



$$V = \frac{1}{3} B h$$

$$V = \frac{1}{3} \pi (9.1)^2 (25)$$

$$V = 2147.96$$

$$V = 2148.0 \text{ ft}^3$$