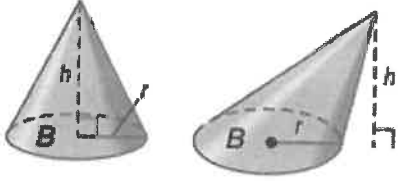


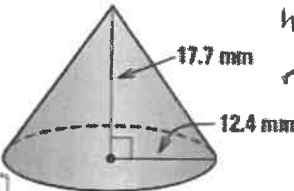
Key Concept Volume of a Cone		
Words	The volume of a circular cone is $V = \frac{1}{3}Bh$, or $V = \frac{1}{3}\pi r^2h$, where B is the area of the base, h is the height of the cone, and r is the radius of the base.	Models
Symbols	$V = \frac{1}{3}Bh$ or $V = \frac{1}{3}\pi r^2h$	

1. Find the volumes of the solids below:

a.

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

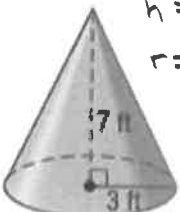
$$= \frac{1}{3}\pi (12.4)^2(17.7)$$

$$= 907.2\pi \text{ mm}^3$$


$h = 17.7$
 $r = 12.4$

d.

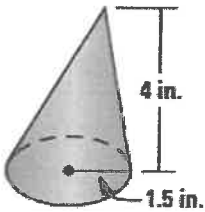
$$V = \frac{1}{3}\pi (3)^2(7)$$

$$= 21\pi \text{ ft}^3$$


$h = 7$
 $r = 3$

b.

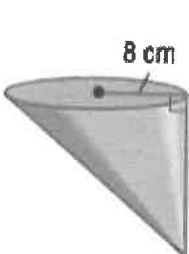
$$V = \frac{1}{3}\pi (1.5)^2(4)$$

$$= 3\pi \text{ in}^3$$


$h = 4$
 $r = 1.5$

e.

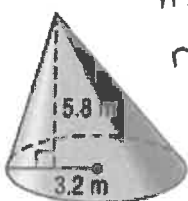
$$V = \frac{1}{3}\pi (8)^2(15)$$

$$= 320\pi \text{ cm}^3$$


$r = 8$
 $h = 15$

c.

$$V = \frac{1}{3}\pi (3.2)^2(5.8)$$

$$= 19.8\pi \text{ m}^3$$


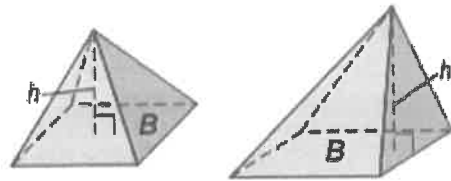
$h = 5.8$
 $r = 3.2$

KeyConcept Volume of a Pyramid

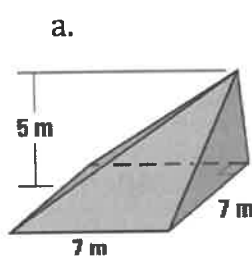
Words The volume of a pyramid is $V = \frac{1}{3}Bh$, where B is the area of the base and h is the height of the pyramid.

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

Models



1. Find the volumes of the solids below:



Base \rightarrow square

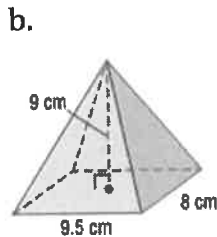
$h = 5$

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

$= \frac{1}{3}(s)^2h$

$= \frac{1}{3}(7)^2(5)$

$= 81.67 \text{ m}^3$



Base \rightarrow rectangle

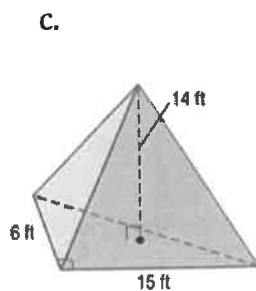
$h = 9$

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

$= \frac{1}{3}(l)(w)(h)$

$= \frac{1}{3}(9.5)(8)(9)$

$= 228 \text{ cm}^3$



Base \rightarrow triangle

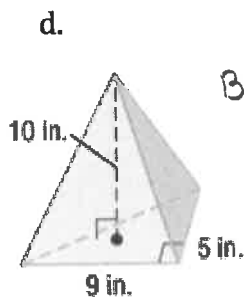
$h = 14$

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

$= \frac{1}{3}(\frac{1}{2}bh_{\Delta})h$

$= \frac{1}{6}(15)(6)(14)$

$= 210 \text{ ft}^3$



Base \rightarrow triangle

$h = 10$

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

$= \frac{1}{3}(\frac{1}{2}bh_{\Delta})h$

$= \frac{1}{6}(9)(5)(10)$

$= 75 \text{ in}^3$