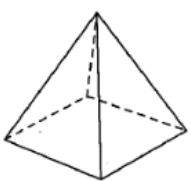
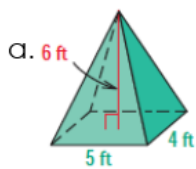


	Prism	Pyramid
Volume of a PYRAMID:	$V = Bh$	$V = \frac{Bh}{3}$
$V =$	$B = \text{area of base}$ $h = \text{height}$	



Example 1: Name the pyramid and then find the volume.



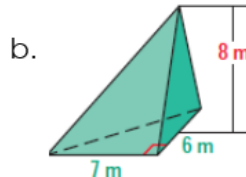
Name:

Rectangular pyramid

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

$$B = 5 \cdot 4 = 20 \text{ ft}^2$$

$$h = 6 \text{ ft}$$



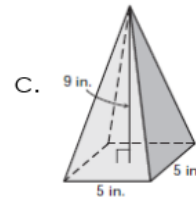
Name:

Triangular pyramid

$$V = \frac{Bh}{3} = \frac{21 \cdot 8}{3} = 56 \text{ m}^3$$

$$B = \frac{7 \cdot 6}{2} = 21 \text{ m}^2$$

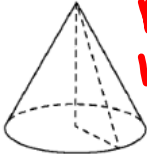
$$h = 8 \text{ m}$$



Name:

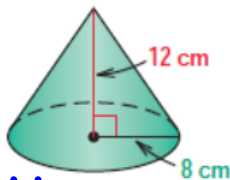
$$V = \frac{25 \cdot 9}{3}$$

$$V = 75 \text{ in}^3$$

	<u>cylinder</u>	<u>cone</u>
<u>Volume of a CONE:</u>	$V = \pi r^2 h$	$V = \frac{\pi r^2 h}{3}$
V =		 $r = \text{radius}$ $h = \text{height}$

Example 2: Find the volume of the cone. Round your answer to the nearest whole number.

a.



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

$$r = 8 \text{ cm} \quad V = \frac{\pi (8)^2 (12)}{3} \checkmark$$

$$h = 12 \text{ cm} \quad V = \frac{\pi (64)(12)}{3}$$

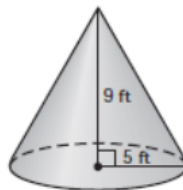
$$V = 256\pi$$

$$V \approx 256(3.14)$$

$$V \approx 803.84$$

$$V \approx 804 \text{ cm}^3$$

b.



$$r = 5 \text{ ft}$$

$$h = 9 \text{ ft}$$

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

$$V = \frac{\pi (5)^2 (9)}{3}$$

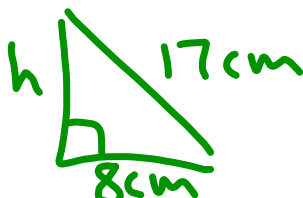
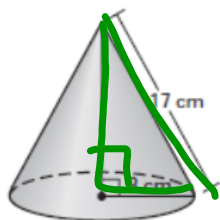
$$V = \frac{\pi (25)(9)}{3}$$

$$V = 75\pi$$

$$V \approx 75(3.14)$$

$$V \approx 235.5$$

Example 3: Find the volume of the cone shown below.



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

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

$$r = 8 \text{ cm}$$

$$h = 15 \text{ cm}$$

$$V = 320\pi$$

$$V \approx 1005 \text{ cm}^3$$

$$a^2 + b^2 = c^2$$

$$h^2 + 8^2 = 17^2$$

$$h^2 + 64 = 289$$

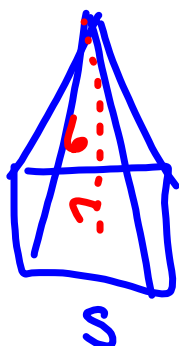
$$h^2 = 225$$

$$\sqrt{h^2} = \sqrt{225}$$

$$h = 15$$

Example 4:

A pyramid with a square base has a volume of 18 cubic inches and a height of 6 inches. What is the side length of the base?



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

$$18 = \frac{B(6)}{3}$$

$$\frac{18}{2} = \frac{2B}{2}$$

$$9 = B$$

Homework: 9.5 Worksheet

$$B = S^2$$

$$9 = S^2$$

$$S = 3 \text{ in}$$