

4 - 8

**Volume of Pyramids
and Cones**

**volume of
a pyramid**

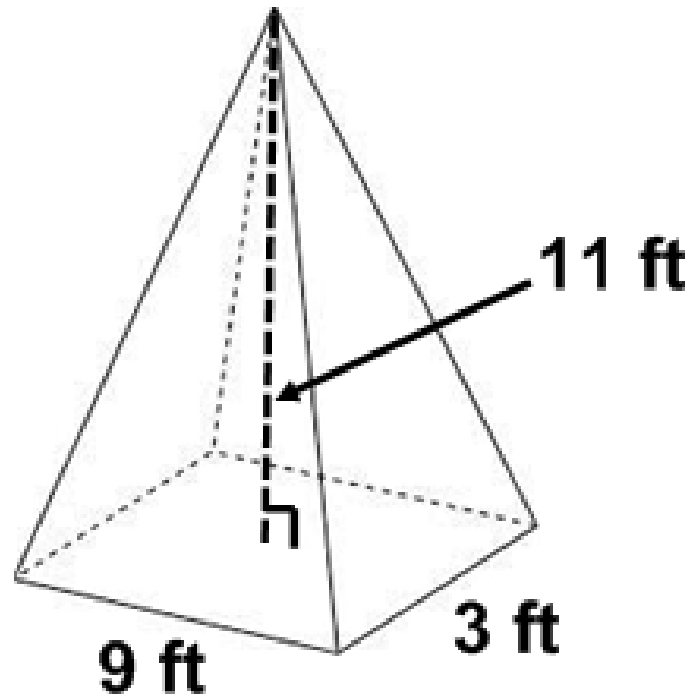
$$V = \frac{1}{3} B h$$

B : area of base

$l \times w$
Ex: A rectangular pyramid has a base 6 in. long and 4 in. wide. Its height is 8 in. Find the volume.

$$\begin{aligned} V &= \frac{1}{3} Bh \\ &= \frac{1}{3} (6 \cdot 4) \cdot 8 \\ &= \boxed{64 \text{ in}^3} \end{aligned}$$

Ex:

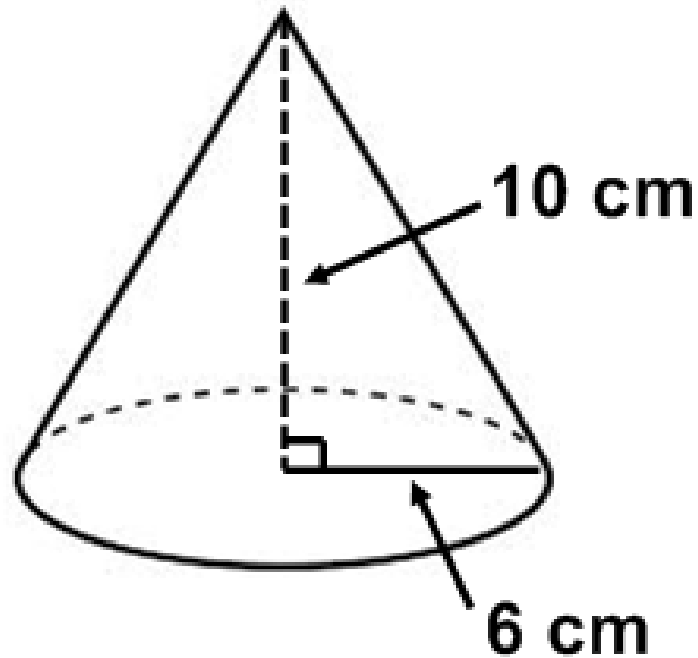


$$\begin{aligned} V &= \frac{1}{3} B h \\ &= \frac{1}{3} (9 \cdot 3) \cdot 11 \\ &= \boxed{99 \text{ ft}^3} \end{aligned}$$

**volume of
a cone**

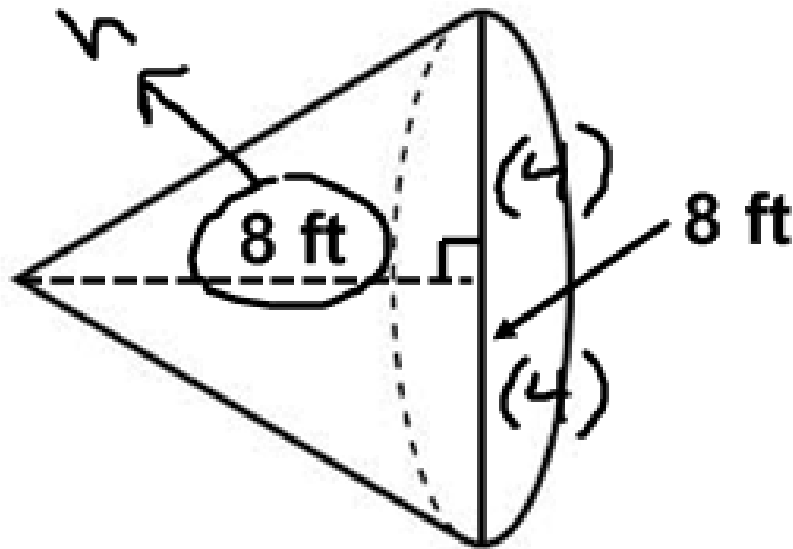
$$V = \frac{1}{3} \pi r^2 h$$

Ex:



$$\begin{aligned} V &= \frac{1}{3} \pi r^2 h \\ &= \frac{1}{3} \cdot \pi \cdot 6^2 \cdot 10 \\ &= 377 \text{ cm}^3 \end{aligned}$$

Ex:



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

$$V = \frac{1}{3} \cdot \pi \cdot 4^2 \cdot 8$$

$$V = 134.04 \text{ ft}^3$$



Homework:

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