

Name _____ Hour _____

Int. Geometry
Ferrington

13-2: Volume of Pyramids & Cones

If a pyramid has a volume of V cubic units, a height of h units, and each base has an area of B square units, then $V = \frac{1}{3}Bh$.

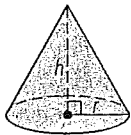
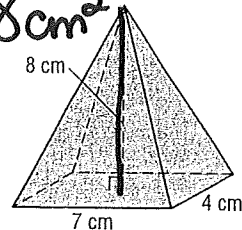
Example:

Find the volume of this pyramid.

$$\begin{aligned} V &= \frac{1}{3}Bh \\ &= \frac{1}{3}(28)(8) \\ &= 74.7 \text{ cm}^3 \end{aligned}$$

$$B = 7(4) = 28 \text{ cm}^2$$

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



If a cone has a volume of V cubic units, a height of h units, and the bases have a radii of r units, then $V = \frac{1}{3}\pi r^2 h$.

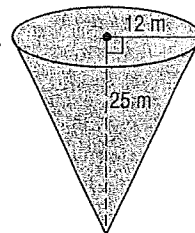
Example:

Find the volume of this right cone.

$$\begin{aligned} V &= \frac{1}{3}\pi r^2 h \\ V &= \frac{1}{3}\pi (12)^2 (25) \\ &= 3769.9 \text{ m}^3 \end{aligned}$$

$$h = 25 \text{ m}$$

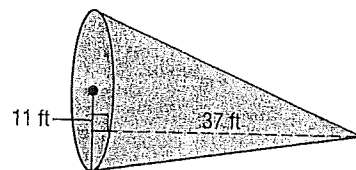
$$r = 12 \text{ m}$$



Example:

Find the volume of this oblique cone.

$$\begin{aligned} V &= \frac{1}{3}\pi (11)^2 (37) \\ &= 4688.3 \text{ ft}^3 \end{aligned}$$



$$h = 37 \text{ ft}$$

$$r = 11 \text{ ft}$$

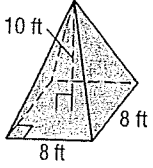
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Int. Geometry
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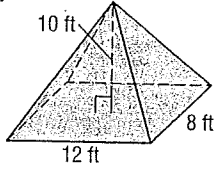
13-2 Homework:

Find the volume of the following pyramids.

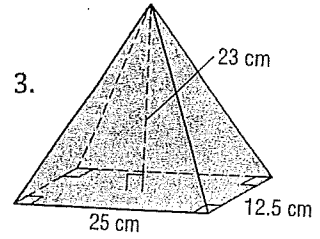
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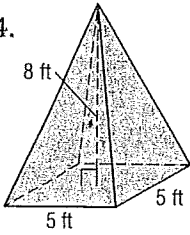
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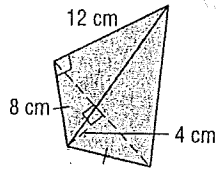
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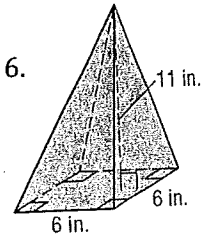
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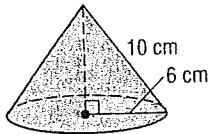


6.

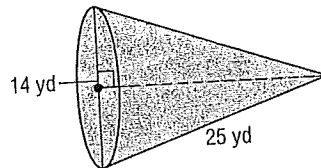


Find the volume of the following cones.

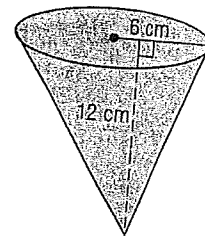
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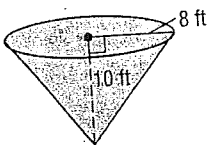
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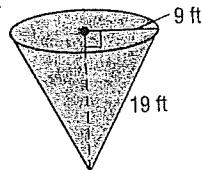
9.



10.



11.



12.

