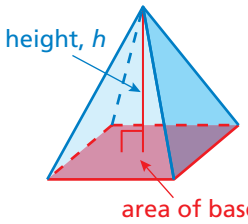
REVIEW: Volumes of Pyramids

Name _____

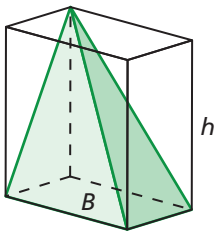
Key Concept and Vocabulary



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

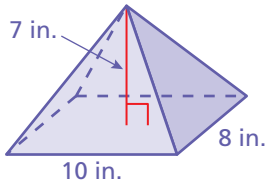
Visual Model

The volume of a pyramid is *one-third* the volume of the prism that has the same base and height.



Skill Example

1.

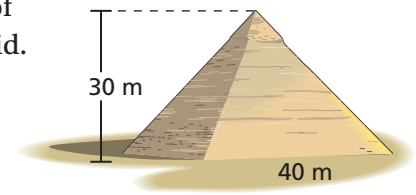


$$V = \frac{1}{3}Bh$$
$$= \frac{1}{3} \cdot (8 \cdot 10) \cdot 7$$
$$= \frac{560}{3}$$
$$= 185\frac{2}{3} \text{ in.}^3$$

Application Example

2. Find the volume of the square pyramid.

$$V = \frac{1}{3} \cdot (40^2) \cdot 30$$
$$= 16{,}000$$



∴ The volume is 16,000 cubic meters.

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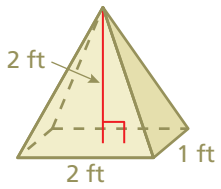
Check your answers at BigIdeasMath.com.

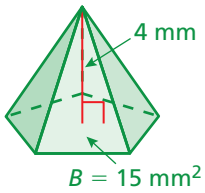
Find the volume of the pyramid.

3.



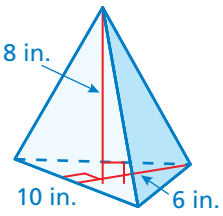
$V =$ $1\frac{1}{3}$ ft^3

4.



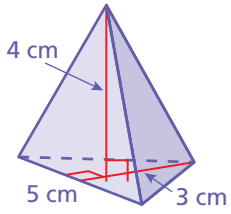
$V =$ 20 mm^3

5.



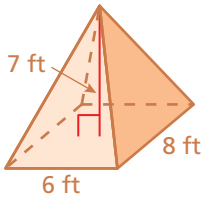
$V =$ 80 in.^{3}

6.



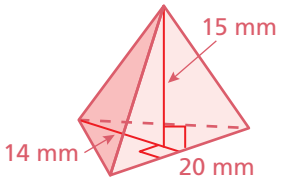
$V =$ 10 cm^3

7.



$V =$ 112 ft^3

8.



$V =$ 700 mm^3

9. PYRAMID The pyramid has a volume of 2000 cubic feet. Find a set of possible dimensions for the pyramid.

Sample answer:

$w =$ 5 ft, $\ell =$ 40 ft, $h =$ 30 ft