

## Math 8

Our Goal: To learn to find the volume of a cone

Warm Up: Turn in your homework with your name on it, please

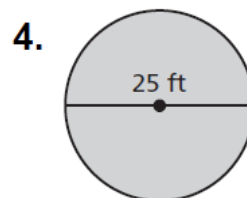
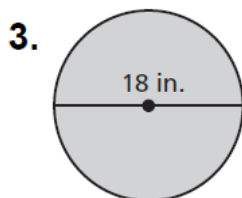
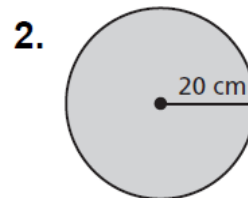
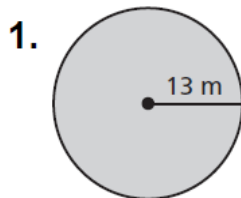
Today's participation measures

Handout 8.2 Practice

Previous participation measures

- Handout 8.1 Practice
- Correct any test mistakes on a separate sheet of paper for partial credit

**Find the area. Round your answer to the nearest tenth.**

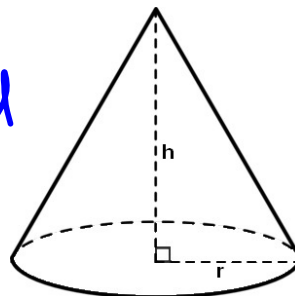


# Essential Question

How can you find the volume of a cone?

A cone is a circular pyramid

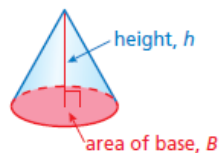
$$V = \frac{1}{3}\pi r^2 h$$



## Key Idea

### Volume of a Cone

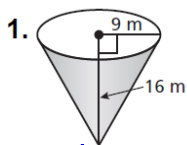
**Words** The volume  $V$  of a cone is one-third the product of the area of the base and the height of the cone.



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

A red arrow points from the 'Area of base' label to the  $B$  in the formula. A blue arrow points from the 'Height of cone' label to the  $h$  in the formula.

Find the volume of the cone. Round your answer to the nearest tenth.

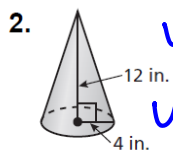


$$V = \frac{1}{3} \pi 9^2 16$$

$$27 \cdot \pi \cdot 16$$

$$432\pi$$

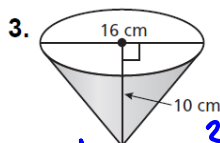
$$V = 1357.2$$



$$V = \frac{1}{3} \pi 4^2 12$$

$$V = 5.3 \pi 12$$

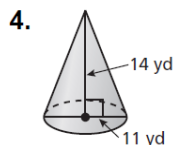
$$V = 201.1$$



$$V = \frac{1}{3} \pi 8^2 10$$

$$V = 21.3 \pi 10$$

$$V = 670.2$$



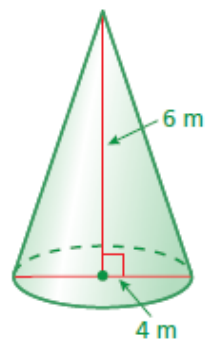
$$V = \frac{1}{3} \pi 5.5^2 14$$

$$V = 10.083 \pi 14$$

$$V = 443.5$$

Find the volume of the cone. Round your answer to the nearest tenth.

?



Find the height of the cone. Round your answer to the nearest tenth.

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

$$956 = \frac{1}{3}\pi 9^2 h$$

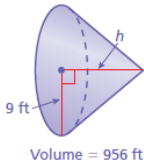
$$\frac{956}{27\pi} = \frac{27\pi h}{27\pi}$$

$$h = 11.3$$

$$956 \div (27 \times \pi)$$

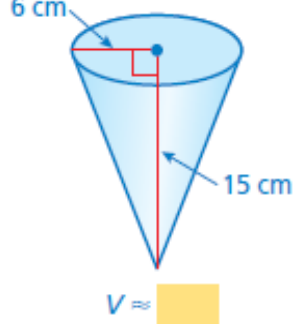
$$956 \div 27 \div \pi$$

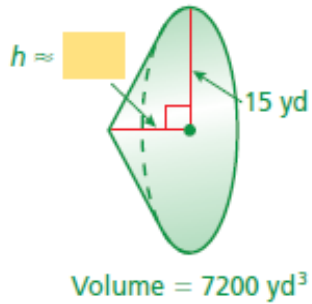
$$V = \frac{1}{3}\pi r^2 h$$



9 ft  
Volume = 956 ft<sup>3</sup>

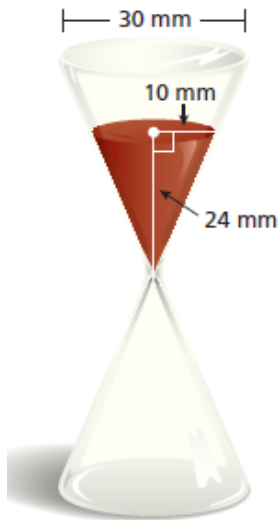
Find the volume  $V$  or height  $h$  of the cone. Round your answer to the nearest tenth.

1. 
  
 $V \approx$

2. 
  
 $h \approx$  
  
 Volume = 7200 yd<sup>3</sup>

Math 8 Unit 7 Section 8.2 Day 1-2

You must answer a trivia question before the sand in the timer falls to the bottom. The sand falls at a rate of 50 cubic millimeters per second. How much time do you have to answer the question?



**Exit Ticket:** Have students find the volume of the ice cream cone used to motivate the lesson.