

Name \_\_\_\_\_

Date \_\_\_\_\_

Mrs. Roumbos/Ms. Michels

Math 8R

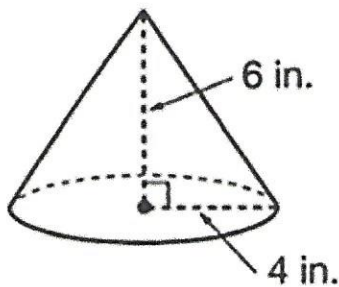
### Volume of a Cone

To find the volume of a cone, we use the following formula: \_\_\_\_\_

In the formula,  $r =$  \_\_\_\_\_ and  $h =$  \_\_\_\_\_

**Example:**

What is the volume of this cone to the nearest hundredth? Use 3.14 for  $\pi$ .



- What is the radius? \_\_\_\_\_
- What is the height? \_\_\_\_\_
- Then substitute!

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

$$V = \frac{1}{3}(\text{_____})(\text{_____})^2(\text{_____})$$

$$V =$$

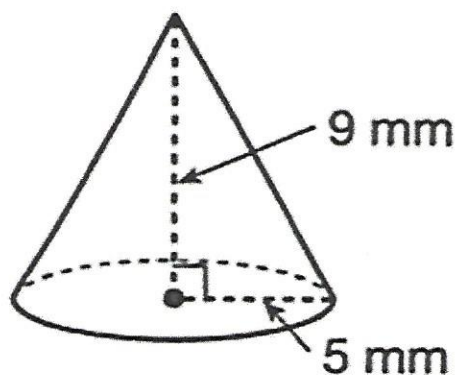
$$V =$$

What do we do if we are given the diameter instead of the radius?

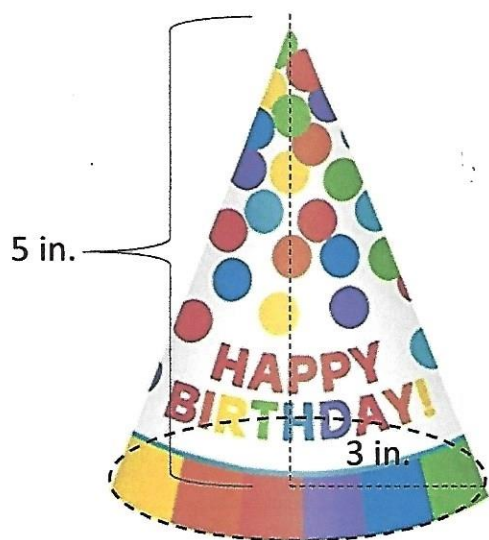
\_\_\_\_\_ the diameter by \_\_\_\_\_.

**Examples:** Answer the questions below using the formula for the volume of a cone. Be sure to round properly and use the correct value for  $\pi$ .

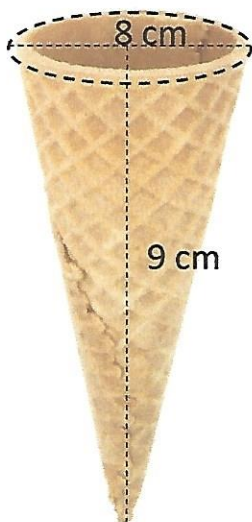
- 1) Find the volume of the cone below. Round your answer to the nearest tenth.



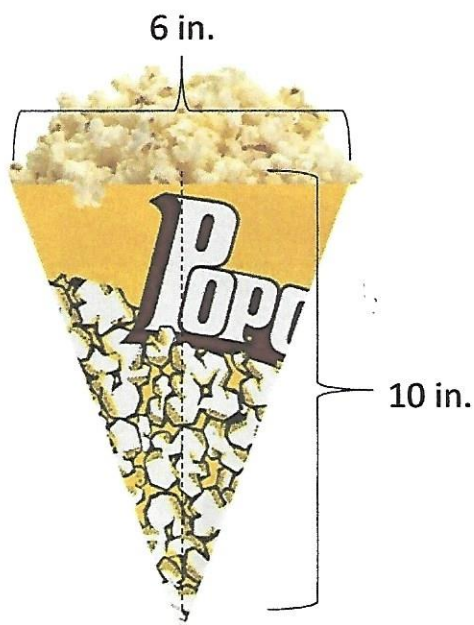
- 2) A party hat is in the shape of a cone with a radius of 3 in. and a height of 5 in. What is the volume of the party hat? Leave your answer in terms of  $\pi$ .



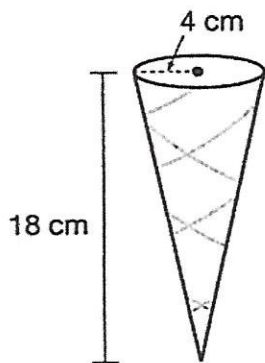
- 3) How much ice cream can fit inside a cone that has a diameter of 8 cm. and a height of 9 cm.? Use 3.14 for  $\pi$ .



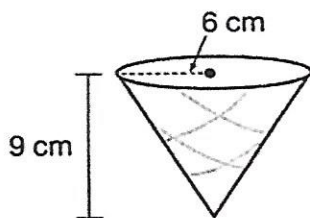
- 4) At the school carnival, popcorn is given out in paper treat cones like the one shown. Approximately how many cubic inches can each cone hold? Round your answer to the nearest whole number.



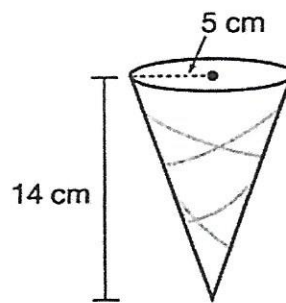
5) Isabella can choose one of three different cones for her ice cream. The dimensions of the cones are shown below.



Cone A



Cone B



Cone C

Isabella wants to choose the cone that holds the greatest amount of ice cream. Which cone should she choose? \_\_\_\_\_

Explain your answer \_\_\_\_\_

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Show your work:

Cone A	Cone B	Cone C