Day 5 – Volume of Cylinders and Cones

On Day 4, we learned about volume, specifically the volume of a pyramids and prisms. Today, we will learn the volume formulas of 2 more 3-D objects: cylinders and cones.
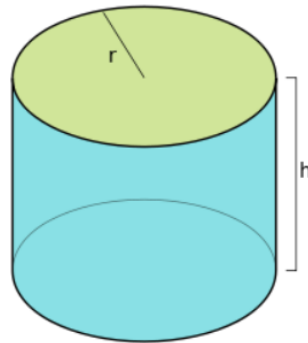
Discovering the Volume of a Cylinder

One thing we learned yesterday was the importance of the area of the base. What is the base of EVERY cylinder? _____
What is the area of the base of a cylinder? (area of the shape you listed above) _____

The information that we have only covers the base. Using the image above and the information you have, what do you conclude is the formula for the volume of a cylinder?
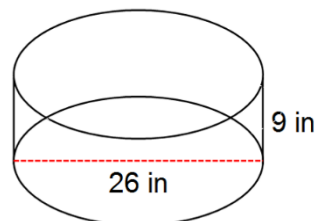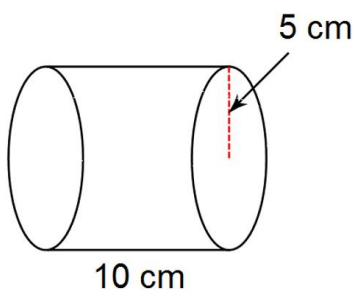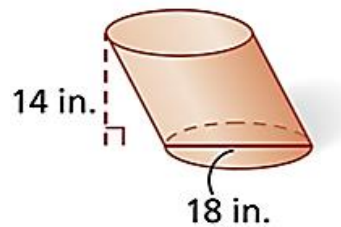
Volume of a Cylinder = _____
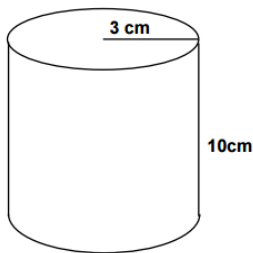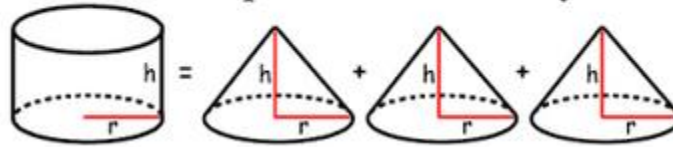Where "B" is the area of the base.

Practice with Cylinders

Directions: Find the volume. Write your answer exactly.

3 cm

10cm

14 in.

18 in.

5 cm

10 cm

9 in

26 in

Discovering the Volume of a Cone

Volume Comparison: Cone & Cylinder

Above is a volume comparison between cylinders and cones. The volume of three cones is the equivalent to the volume of one cylinder or it takes three cones to fill one cylinder.

Find the following using the information above:

1. Volume of a cylinder = 36 in³   Volume of a cone = _____

2. Volume of a cylinder = 96 ft³   Volume of a cone = _____

3. Volume of a cylinder =_____   Volume of a cone = 44 m³

Using the information given above and our calculations, we can conclude that the volume of a cone is:

Volume of a Cone = _____
Where "B" is the area of the base.

Practice with Cones

Directions: Find the volume of the cone. Write your answers exactly.

6 m

4 m

6 cm

15 cm

26 mm

20 mm

2 mi

5 mi