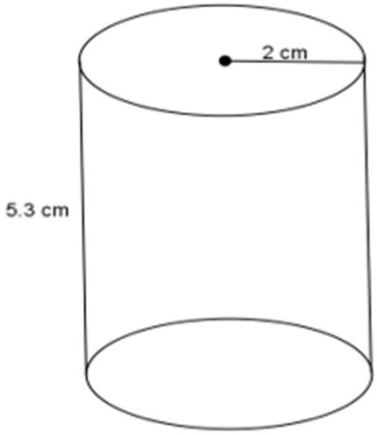
Volumes of Cones & Cylinders

1. Use the diagram to the right to answer the questions.

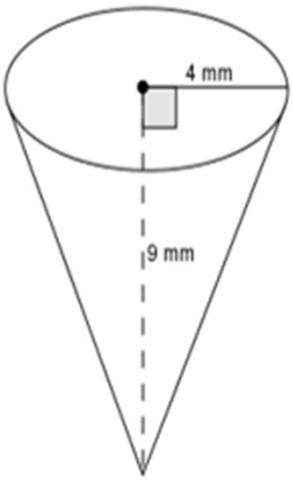


a) What is the area of the base?

b) What is the height?

c) What is the volume of the right circular cylinder?

2. Use the diagram to find the volume of the right circular cone.



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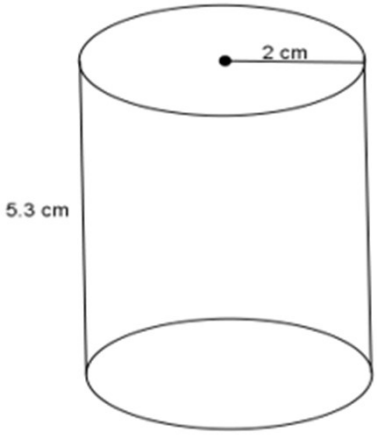


a) What is the area of the base?

$$A = \pi 2^2$$
$$A = 4\pi$$

The area of the base is $4\pi \text{ cm}^2$

b) What is the height?

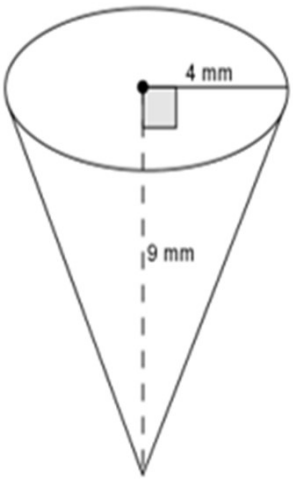
The height of the right circular cylinder is 5.3 cm.

c) What is the volume of the right circular cylinder?

$$V = (\pi r^2)h$$
$$V = (4\pi)5.3$$
$$V = 21.2\pi$$

The volume of the right circular cylinder is $21.2\pi \ cm^3$.

2. Use the diagram to find the volume of the right circular cone.



$$V = \frac{1}{3}(\pi r^2)h$$
$$V = \frac{1}{3}(\pi 4^2)9$$
$$V = 48\pi$$

The volume of the right circular cone is $48\pi \ mm^3$.