

# Unit 6 – Google Meet Notes

## Volume of Cones

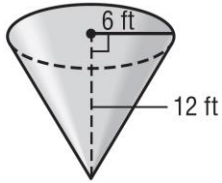
A **cone** is a three-dimensional shape with one circular base.

The volume  $V$  of a cone with radius  $r$  is one third the area of the base  $B$  times the height  $h$ .

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

### Example

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



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

Volume of a cone

$$V = \frac{1}{3}(\pi \cdot 6^2 \cdot 12)$$

$r = 6$  and  $h = 12$

$$V \approx 452.4$$

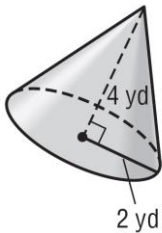
Simplify.

The volume is about 452.4 cubic feet.

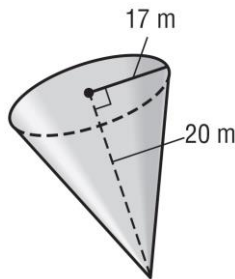
### Exercises

Find the volume of each cone. Round to the nearest tenth.

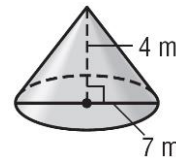
1.



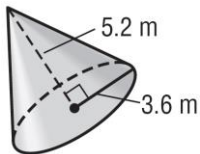
2.



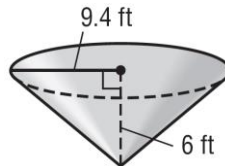
3.



4.



5.



6.

