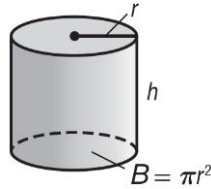


Unit 8 – Google Meet Notes

Volume of Cylinders

As with prisms, the area of the base of a **cylinder** tells the number of cubic units in one layer. The height tells how many layers there are in the cylinder. The volume V of a cylinder with radius r is the area of the base B times the height h .

$$V = Bh, \text{ where } B = \pi r^2, \text{ or } V = \pi r^2 h$$



Example

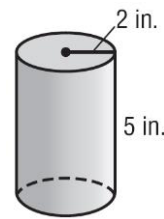
Find the volume of the cylinder. Round to the nearest tenth.

$$V \approx \pi r^2 h \quad \text{Volume of a cylinder}$$

$$V \approx \pi(2)^2(5) \quad \text{Replace } r \text{ with 2 and } h \text{ with 5.}$$

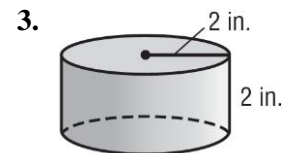
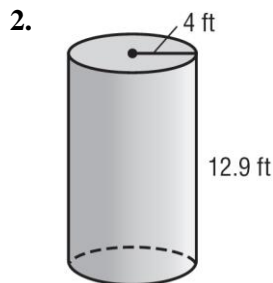
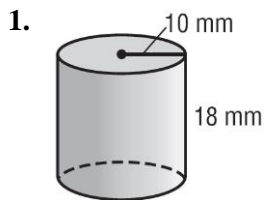
$$V \approx 62.8318 \quad \text{Use a calculator}$$

The volume is about 62.8 cubic inches.



Exercises

Find the volume of each cylinder. Round to the nearest tent



4. radius = 9.5 yd
height = 2.2 yd

5. diameter = 6 cm
height = 11 cm

6. diameter = 3.4 m
height = 1.25 m