

Warm Up

Find the area of the figure.

1. Trapezoid with bases 12 ft and 18 ft and height 3 ft.



$$A = \frac{(12+18)3}{2} \approx 27.5$$

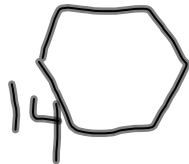
2. Circle with diameter 8.2 in.



~~$A = 324$~~

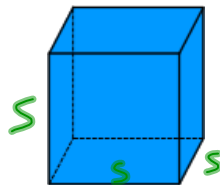
πr^2 $\pi 4.1^2$ 52.8

3. Regular hexagon with side length 14 cm.



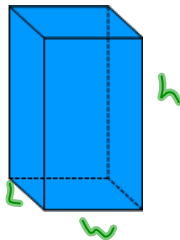
12-4 Volume of Prisms and Cylinders

Volume of a cube -



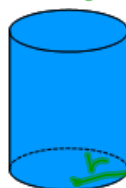
$$V = s^3$$

Volume of a prism -



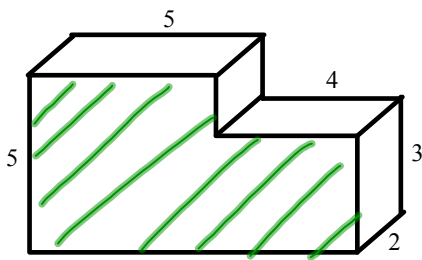
$$V = L \cdot w \cdot h$$

Volume of a cylinder -



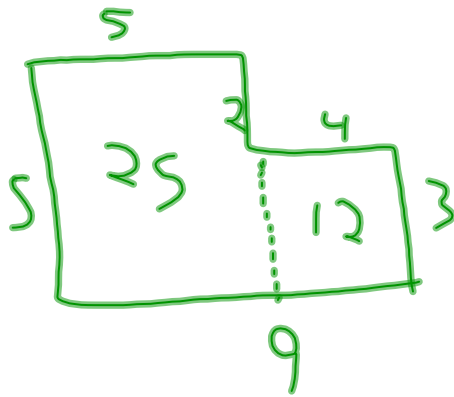
$$V = \pi r^2 h$$

Ex 1 Find the volume of the solid.

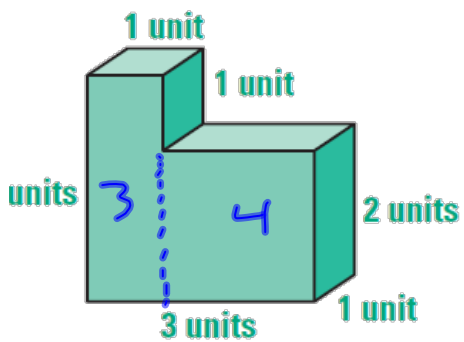


$$V = 37.2$$

$$V = 74$$

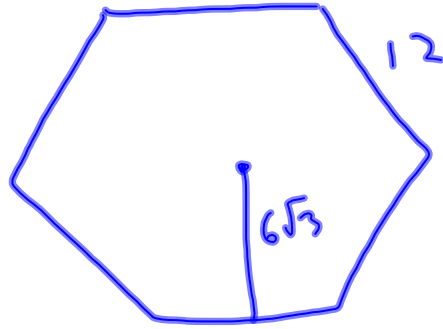
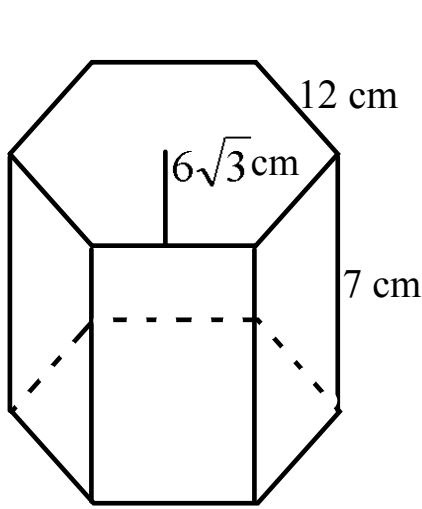


Ex. 2 Find the volume of the solid.



$$7 \text{ units}^3$$

Ex 3 Find the volume of the right hexagonal prism.



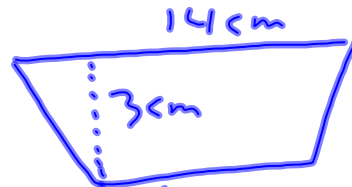
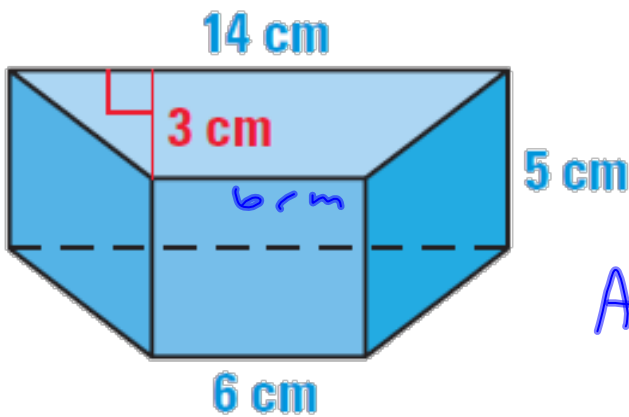
$$V \approx 2618.9 \text{ cm}^3$$

$$A = \frac{1}{2} \cdot a \cdot P$$

$$= \frac{1}{2} \cdot 6\sqrt{3} \cdot 72$$

$$A \approx 374.1 \text{ cm}^2$$

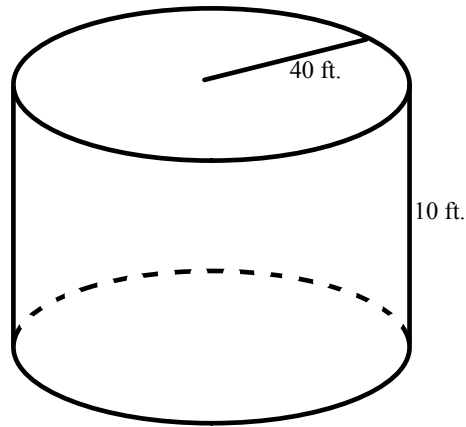
Ex. 4 Find the volume of the right prism.



$$A = \frac{14+6}{2} \cdot 3 = 30 \text{ cm}^2$$

$$V = 150 \text{ cm}^3$$

Ex 5 Find the volume of the cylinder.



$$\pi \cdot 40^2 \cdot 10$$

$$50,265.4 \text{ ft}^3$$

Ex. 6 Find the volume of the oblique cylinder.

