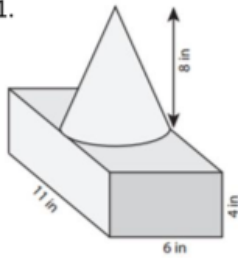


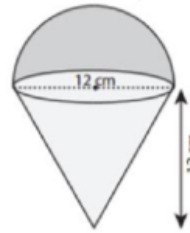
Ex 1.



Volume = \_\_\_\_\_

Refer to Class Notes

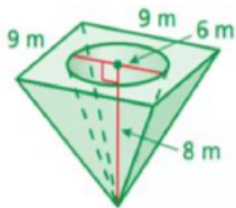
Ex 2.



Volume = \_\_\_\_\_

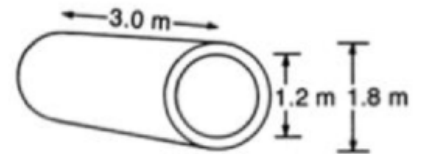
Refer to class notes

Ex. 3 Find the volume left after removing the shown cone from the given pyramid.



Refer to class notes

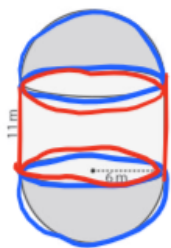
Ex. 4 A section of concrete pipe 30 m long has an inside diameter of 1.2 m and an outside diameter of 1.8 m. What is the volume of concrete in this section of pipe?



Refer to class notes

Find the volume of the following figures and composite figures.

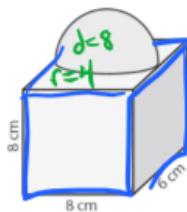
1.



$$\text{Volume} = \frac{684\pi \text{ m}^3}{\approx 2148.849 \text{ m}^3}$$

$$\begin{aligned} V_{\text{sphere}} &= \frac{4}{3}\pi r^3 \\ &= \frac{4}{3}\pi(6)^3 \\ &= 288\pi \text{ m}^3 \\ V_{\text{cylinder}} &= \pi r^2 \cdot h \\ &= \pi(6)^2 \cdot 11 \\ &= 396\pi \text{ m}^2 \end{aligned}$$

2.

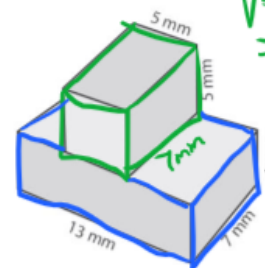


$$\text{Volume} = 518.042 \text{ cm}^3$$

$$\begin{aligned} V_{\text{sphere}} &= \frac{4}{3}\pi r^3 \\ &= \frac{4}{3}\pi(4)^3 \\ &= 268.083 \text{ cm}^3 \\ &= 134.042 \text{ cm}^3 \end{aligned}$$

$$\begin{aligned} V_{\text{prism}} &= 8 \cdot 8 \cdot 6 \\ &= 384 \text{ cm}^3 \end{aligned}$$

3.



$$\text{Volume} = 539 \text{ mm}^3$$

$$\begin{aligned} V &= 5 \cdot 5 \cdot 7 \\ &= 175 \text{ mm}^3 \\ V &= 13 \cdot 7 \cdot 4 \\ &= 364 \text{ mm}^3 \end{aligned}$$

4.

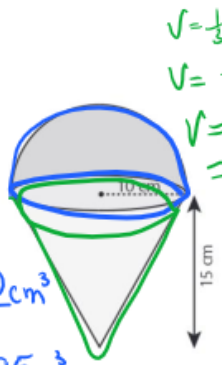
$$V = \frac{4}{3}\pi r^3$$

$$V = \frac{4}{3}\pi(10)^3$$

$$V = \frac{4188.790 \text{ cm}^3}{2}$$

$$V = 2094.395 \text{ cm}^3$$

Volume = 3665.191 cm<sup>3</sup>  
add the volumes

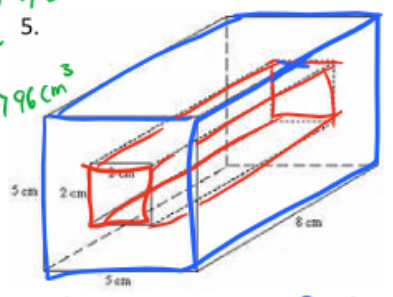


$$V = \frac{1}{3}\pi r^2 h$$

$$V = \frac{1}{3}\pi(10)^2 \cdot 15$$

$$V = 500\pi$$

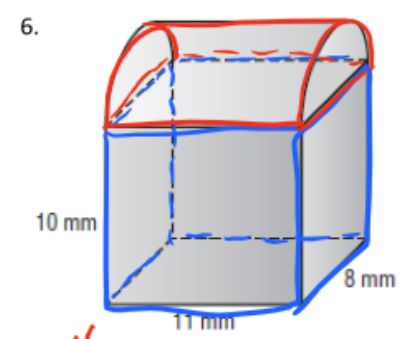
$$= 1570.796 \text{ cm}^3$$



$$V_{\text{prism}} = 5 \cdot 5 \cdot 8 = 200$$

$$V_{\text{prism}} = 2 \cdot 2 \cdot 8 = 32$$

$$168 \text{ cm}^3$$



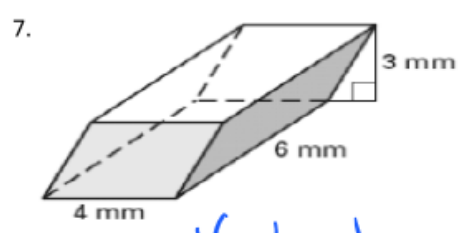
$$V_{\text{cylinder}} = \frac{\pi(4)^2(11)}{2} = \frac{44\pi}{2} = 22\pi$$

$$\approx 69.115$$

$$V_{\text{prism}} = 10 \cdot 11 \cdot 8 = 880$$

$$+ 69.115$$

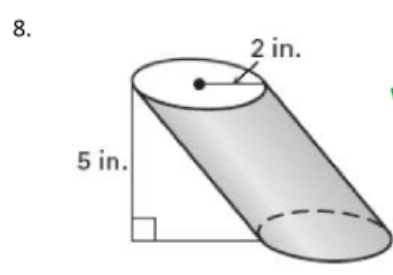
$$949.115 \text{ mm}^3$$



$$V = l \cdot w \cdot h$$

$$V = 6 \cdot 4 \cdot 3$$

$$= 72 \text{ mm}^3$$

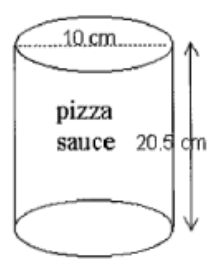


$$V = \pi(2)^2 \cdot 5$$

$$V = 20\pi$$

$$V = 62.832 \text{ in}^3$$

9. Find the difference in volume between the two figures.



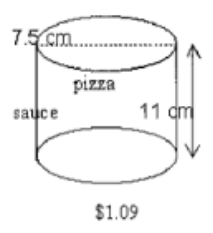
$$V = \pi(5)^2 \cdot 20.5$$

$$= 512.5\pi$$

$$512.5\pi$$

$$- 154.6875\pi$$

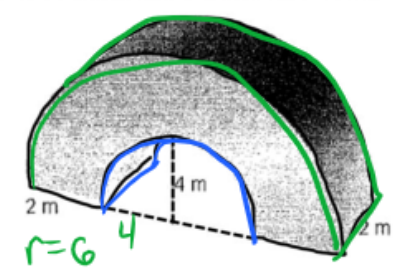
$$\hline 357.8125\pi \text{ cm}^3$$



$$V = \pi(3.75)^2 \cdot 11$$

$$= 154.6875\pi$$

10. What volume of concrete is required to build this footbridge?



$$V = \pi(6)^2 \cdot 2 = \frac{72\pi}{2} = 36\pi$$

$$V = \pi(4)^2 \cdot 2 = \frac{32\pi}{2} = 16\pi$$

$$36\pi - 16\pi = 20\pi \text{ m}^3 = 62.832 \text{ m}^3$$