

L8 Volumes of Pyramids and Cones

How does the **volume** of any **pyramid** (or **cone**) compare to the volume of a **prism** (or **cylinder**) of the same size of base and height?

$$V = \frac{A_b \cdot h}{3}$$

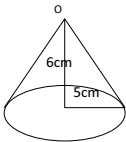
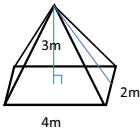
$$V_{\text{pyramid}} = \frac{A_b \cdot h}{3}$$

$$V_{\text{cone}} = \frac{\pi r^2 h}{3}$$

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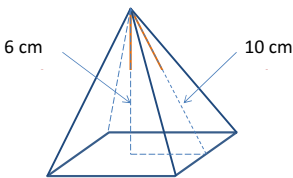
$$V_{\text{cone}} = \frac{\pi r^2 h}{3}$$

Ex 1: Find the volume



Ex 2:

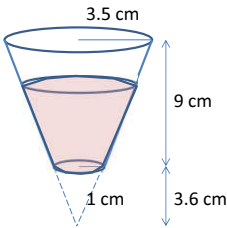
A square base pyramid trophy, has height 6 cm and its slant height is 10 cm. If it is made of aluminum and the mass of 1 dm³ of aluminum is 2.7 Kg, calculate the mass of this trophy.



$$V_{\text{pyramid}} = \frac{A_b \cdot h}{3}$$

Ex 3:

If Eric fills the plastic cup (shown below) to $\frac{3}{4}$ its capacity with lemonade, how much lemonade (in cl) will be poured into the cup?



Practice:
5.6 Set 2

