

6.3-D- Volumes of Pyramids and Cones

The **volume** of any **pyramid** or **cone** is $\frac{1}{3}$ that of a prism of the same height and base.

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

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

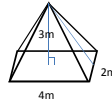
$$V_{\text{cone}} = \frac{\pi r^2 h}{3}$$

1

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

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

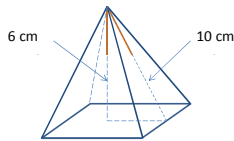
Ex 1: Find the volume



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Ex 2 p. 198 # 49

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 dm^3 of aluminum is 2.7 Kg, calculate the mass of this trophy.

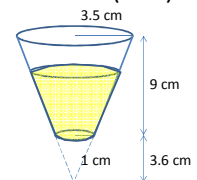


$$V_{\text{pyramid}} = \frac{A_b h}{3}$$

3

Ex 3: p. 199 # 58

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



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Practice:
page 198 # 44,47,51
page 199 # 52,56,



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