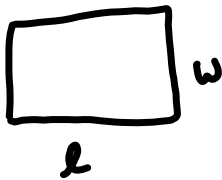


Geometry - 12.1 Volume of Prisms & Cylinders

Reminder about Area Formulas:

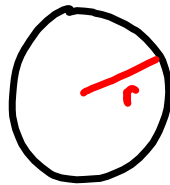
Rectangles

$$A = l \cdot w$$



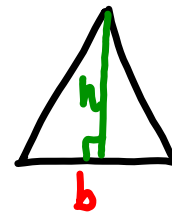
Circles

$$A = \pi r^2$$

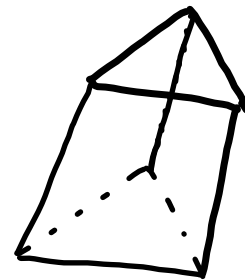
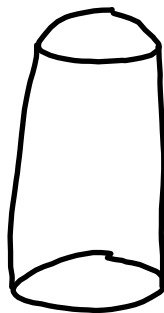
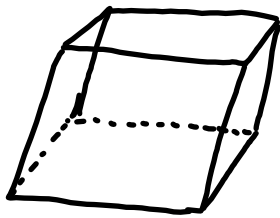


Triangles

$$A = \frac{1}{2} b h$$



Prism/Cylinder Sketching

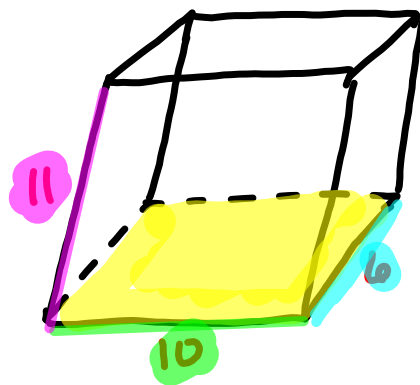


12.1 Area of Prisms and Cylinders

Volume Formula:

$V = \text{Area of Base} * \text{Height}$ of Prism/Cylinder

Ex: Find the Volume of...



Shape of Base:
Rectangle

Area of Base:

$$A = lw$$

$$A = 10 \cdot 6 = 60 \text{ units}^2$$

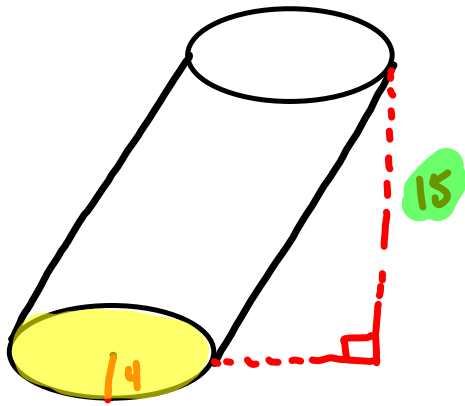
$$V = \text{Area of Base} \cdot \text{Height}$$

$$= 60 \cdot 11$$

$$= 660 \text{ units}^3$$

12.1 Area of Prisms and Cylinders

Ex: Find the Volume of...



Base

Area of Base

$$A = \pi r^2$$

$$= \pi \cdot 4^2$$

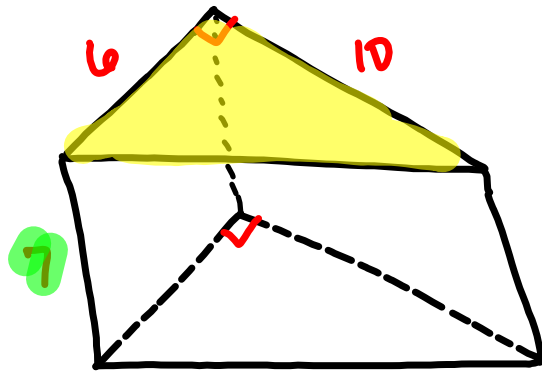
$$= 16\pi \text{ units}^2$$

Height: 15

$$\begin{aligned} \text{Volume} &= 16\pi \cdot 15 \\ &\approx 754 \text{ units}^3 \end{aligned}$$

12.1 Area of Prisms and Cylinders

Ex: Find the Volume of...



Base : Triangle

$$\begin{aligned} \text{Area} &= \frac{1}{2} (6) (10) \\ &= 30 \text{ units}^2 \end{aligned}$$

Height : 7

$$\begin{aligned} \text{Volume} &= \text{Area of Base} \cdot \text{Height} \\ &= 30 \cdot 7 \\ &= 210 \text{ units}^3 \end{aligned}$$

12.1 Area of Prisms and Cylinders

Homework:

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