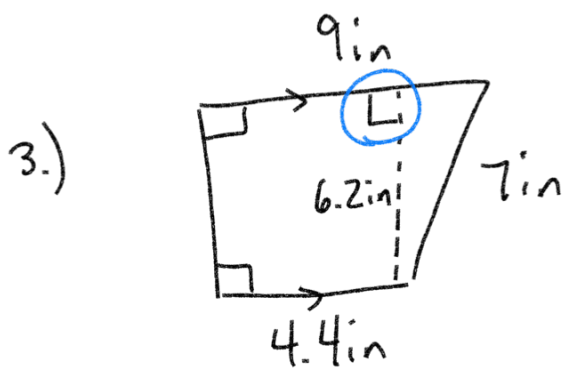


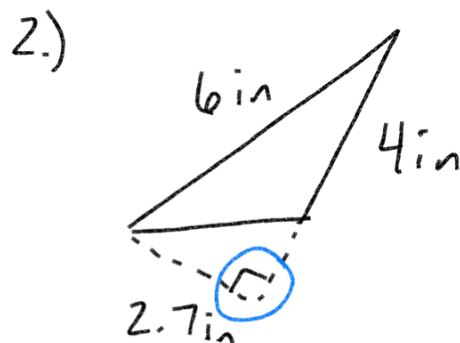
$$A = bh$$

$$(9.3 \text{ ft})(4.6 \text{ ft}) = \boxed{42.78 \text{ ft}^2}$$



$$A = \left(\frac{b_1 + b_2}{2} \right) h$$

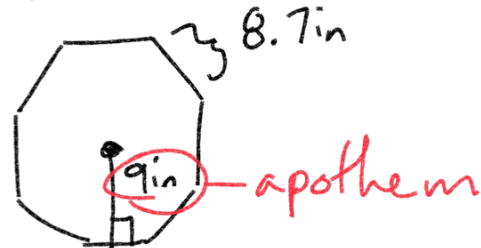
$$A = \left(\frac{4.4 \text{ in} + 9 \text{ in}}{2} \right) (6.2 \text{ in}) = \boxed{41.54 \text{ in}^2}$$



$$A = \frac{1}{2}bh$$

$$\frac{1}{2}(4 \text{ in})(2.7 \text{ in}) = \boxed{5.4 \text{ in}^2}$$

4.) Regular **Octagon**



$$A = \frac{1}{2}(\text{perimeter})(\text{apothem})$$

$$A = \frac{1}{2}(8.7 \text{ in} * 8)(9 \text{ in}) = \boxed{313.2 \text{ in}^2}$$

5.)



$$\{r = 2.3 \text{ in}$$

$$(2.3 \text{ in})(2.3 \text{ in})(2.3 \text{ in})$$

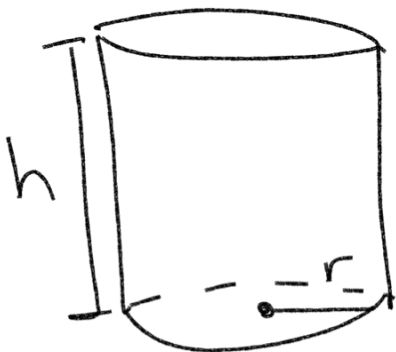
$$V = \frac{4}{3} \pi r^3$$

in^3

$$V = \frac{4}{3} \pi (2.3 \text{ in})^3$$

$$= \boxed{50.94 \text{ in}^3}$$

Volume of a Prism
(Cylinder)

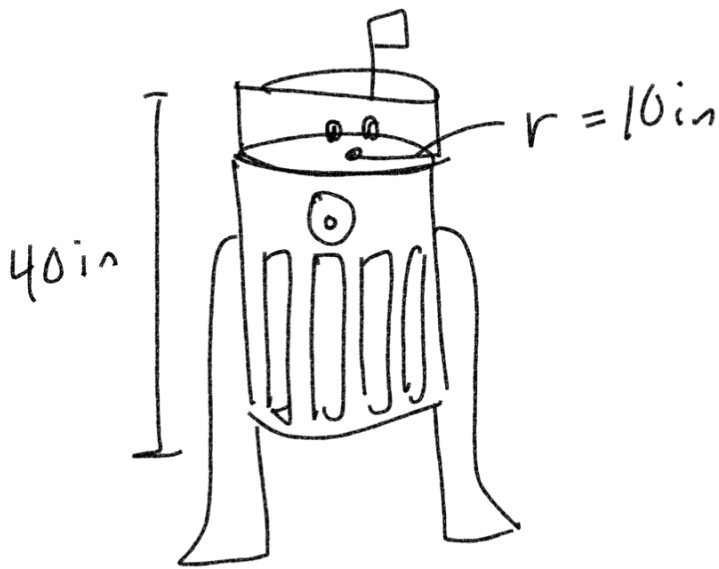


$$\text{Volume} = \left(\begin{array}{c} \text{Area of} \\ \text{Base} \end{array} \right) (\text{Height})$$

Base shape: circle

$$\text{Area: } \pi r^2$$

$$\text{Vol of cylinder} = \pi r^2 h$$

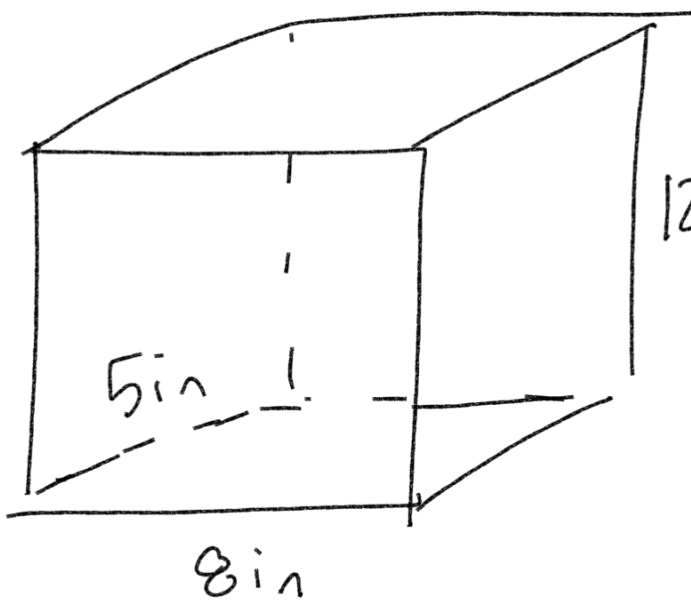


$$V = \pi r^2 h$$

$$V = \pi (10 \text{ in})^2 (40 \text{ in})$$

$$= 12566.4 \text{ in}^3$$

Volume of Prism



$$V = (\text{Area of Base}) \text{ height}$$

shape of base = rectangle

Area of rectangle : $L * W$

$$\text{Volume} = L * W * H$$

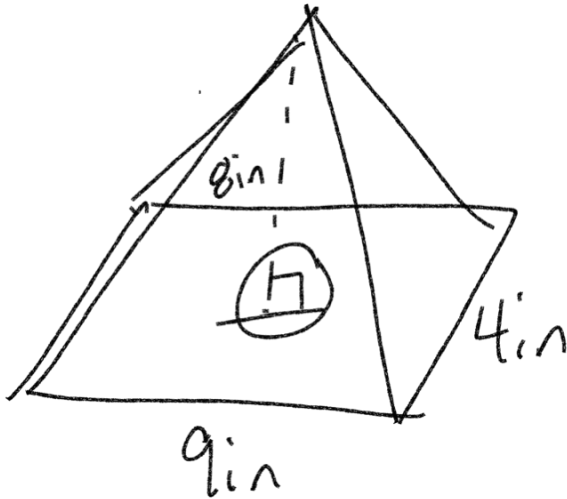
$$(5 \text{ in}) (8 \text{ in}) (12 \text{ in})$$

$$480 \text{ in}^3$$

$$y \cdot y \cdot y = y^3$$

$$\text{in} \cdot \text{in} \cdot \text{in} = \text{in}^3$$

Volume of Rectangular Pyramid



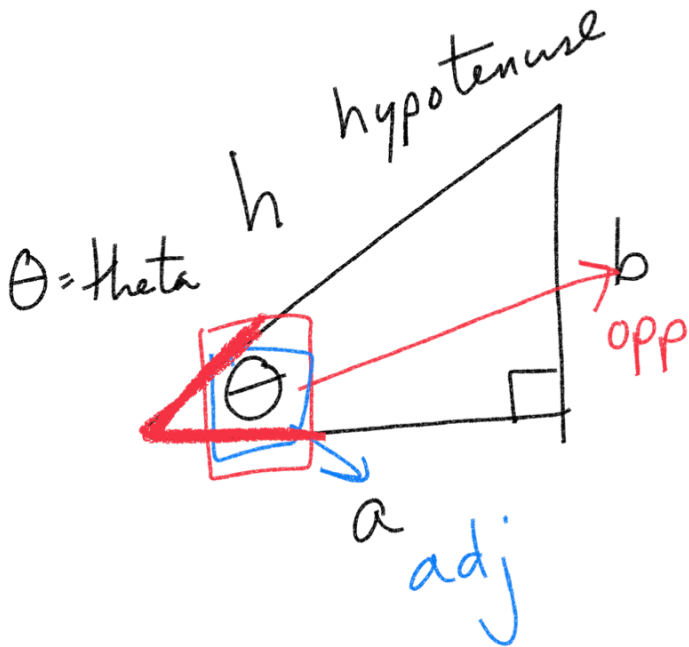
$$V = \frac{1}{3} (\text{base}) (\text{height})$$

$L \times W$

$$\frac{1}{3} (9 \text{ in}) (4 \text{ in}) (8 \text{ in})$$

96 in^3

Trigonometric Ratios: Right Triangles



sine

$$\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{b}{h}$$

cosine

$$\cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}} = \frac{a}{h}$$

$$\tan \theta = \frac{\sin \theta}{\cos \theta}$$

$$\tan \theta = \frac{\frac{b}{h}}{\frac{a}{h}}$$

tangent

$$\tan \theta = \frac{\text{opposite}}{\text{adjacent}} = \frac{b}{a}$$

$$\frac{b}{h} \div \frac{a}{h}$$

$$\downarrow \quad \downarrow$$

$$\frac{b}{h} * \frac{h}{a} = \frac{b}{a}$$

Keep change
Flip

$$= \frac{b}{a}$$

SIN

SOH

$$\sin \theta = \frac{\text{opp}}{\text{hyp}}$$

COS

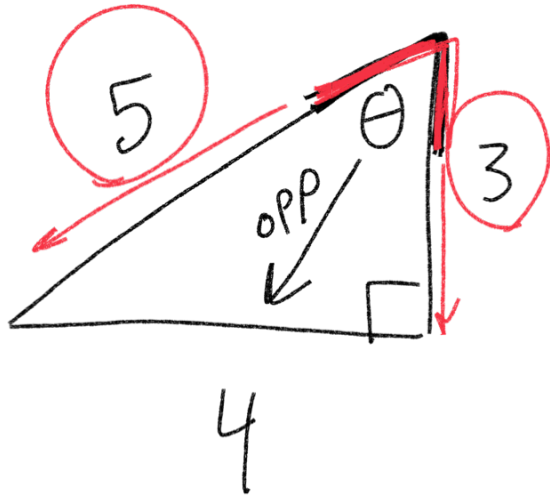
CAH

$$\cos \theta = \frac{\text{adj}}{\text{hyp}}$$

TAN

TOA

$$\tan \theta = \frac{\text{opp}}{\text{adj}}$$



$$\sin \theta = \frac{\text{opp}}{\text{hyp}} = \frac{4}{5}$$

$$\cos \theta = \frac{\text{adj}}{\text{hyp}} = \frac{3}{5}$$

$$\tan \theta = \frac{\text{opp}}{\text{adj}} = \frac{4}{3}$$