

Cube: Volume = $A_{\text{base}} \cdot H$ ($L \times W \times H$)

→ 3 Pyramids make up a cube

$$V = \frac{1}{3} A_{\text{base}} \cdot H$$

Cone: 3 cones make up 1 cylinder.

$$V = A_{\text{base}} \cdot H$$
$$V = \frac{1}{3} \pi r^2 \cdot H \quad \leftarrow \text{Now!!}$$

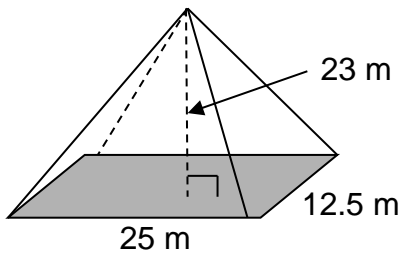
Volume of Pyramids and Cones
Worksheet

Name _____

Write the specified information then find the volume of each solid. Round to the nearest tenth.

1. Base 312.5 m

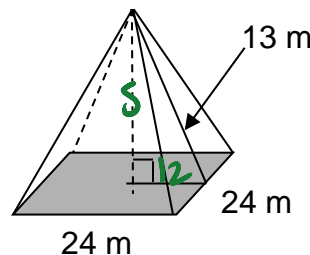
$$V = \underline{2395.83 \text{ m}^3}$$



$$\frac{1}{3}(312.5)(23)$$

2. Height 5

$$V = \underline{960 \text{ m}^3}$$



$$\frac{1}{3}(576)(5)$$

$$12^2 + x^2 = 13^2$$
$$x^2 = 169 - 144$$
$$x = 5$$

3. Height 4

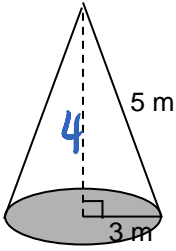
$$V = \underline{12\pi \text{ m}^3}$$

Answer in terms of pi.

4. Radius 9

$$V = \underline{324 \text{ in}^3}$$

Answer in terms of pi.



$$3^2 + x^2 = 5^2$$

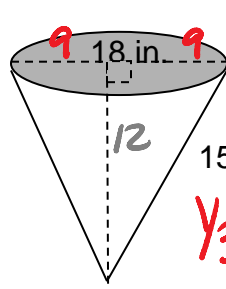
$$x^2 = 25 - 9$$

$$\sqrt{x^2 = 16}$$

$$x = 4$$

$$\frac{1}{3}(9\pi)(4)$$

→ $A_{\text{patnem}} = \text{to height}$



$$9^2 + x^2 = 15^2$$

$$x^2 = 225 - 81$$

$$x = 12$$

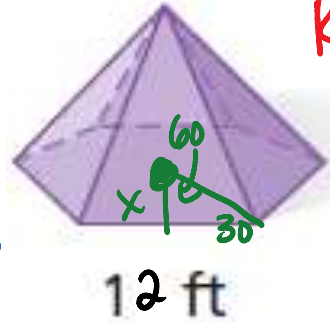
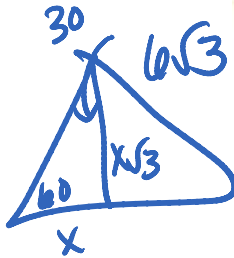
$$\frac{1}{3}(81\pi)(12)$$

$$= 324\pi \text{ in}^3$$

5. Area of the base $\frac{1}{2}(6\sqrt{3})(12) = 216\sqrt{3}$

Height $6\sqrt{3}$

Volume $216\sqrt{3} \cdot 6\sqrt{3} \cdot \frac{1}{3}$
 $= 1296 \text{ ft}^3$



Right
Pyramids

6. Area of the base $\frac{1}{2}(2\sqrt{3})(24) = 24\sqrt{3}$

Height $4\sqrt{3}$

Volume 95.997 cm^3
 $(24\sqrt{3} \cdot 4\sqrt{3} \cdot \frac{1}{3})$

