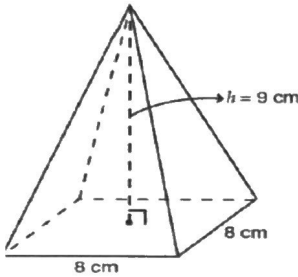


Geometry  
Unit 6 Volume  
Day 3 - Pyramid and Sphere Practice

Name Key  
Date \_\_\_\_\_ Block \_\_\_\_\_

1. Find the Volume

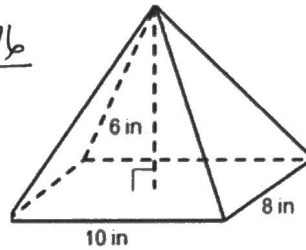
$$V = \frac{1}{3} Bh$$



$$V = \frac{(8)(8)(9)}{3} = \frac{576}{3}$$

Volume =  $\boxed{192 \text{ cm}^3}$

2. Find the Volume

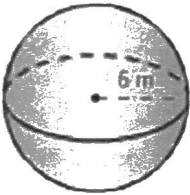


$$V = \frac{1}{3} (10)(10)(6) = \frac{480}{3}$$

Volume =  $\boxed{160 \text{ in}^3}$

3. Find the Volume

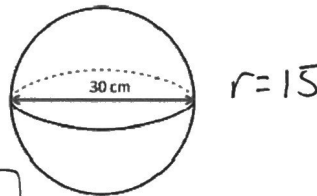
$$V = \frac{4}{3} \pi r^3$$



$$V = \frac{4}{3} \pi (6)^3$$

Volume =  $\boxed{288\pi \text{ in}^3}$

4. Find the Volume



$$V = \frac{4}{3} \pi (15)^3$$

Volume =  $\boxed{4500\pi \text{ cm}^3}$

5. A square pyramid has a volume of 1573 ft<sup>3</sup>. If the length and width of the base is 11 ft, find its height.

$$V = \frac{1}{3} Bh$$

$$3 \cdot 1573 = \frac{(11)(11)(h)}{3}$$

$$\frac{4719}{121} = \frac{121(h)}{121}$$

Height =  $\boxed{39 \text{ ft}}$

6. A square pyramid has a height of 10.5 in and a volume of 252 in<sup>3</sup>. Find the area of the base.

$$V = \frac{1}{3} Bh$$

$$3 \cdot 252 = \frac{l \cdot w (10.5)}{3}$$

$$\frac{756}{10.5} = \frac{l \cdot w (10.5)}{10.5}$$

$$l \cdot w = 72$$

Area of Base (B) =  $\boxed{72 \text{ in}^2}$

7. The volume of a sphere is 904.78 cm<sup>3</sup>. Find the radius.  $V = \frac{4}{3} \pi r^3$

$$3 \cdot 904.78 = \frac{4}{3} \pi r^3 \cdot 3$$

$$\frac{2714.34}{\pi} = \frac{4\pi r^3}{\pi}$$

$$\frac{864}{4} = \frac{4}{4} r^3$$

$$216 = r^3 \quad \sqrt[3]{216} = \sqrt[3]{r^3}$$

Radius =  $\boxed{6 \text{ cm}}$

8. The volume of a sphere is 18,432π in<sup>3</sup>. Find the diameter.  $V = \frac{4}{3} \pi r^3$

$$3 \cdot 18,432\pi = \frac{4}{3} \pi r^3 \cdot 3$$

$$\frac{55,296\pi}{4\pi} = \frac{4\pi r^3}{4\pi}$$

$$\sqrt[3]{13,824} = \sqrt[3]{r^3}$$

$$24 = r$$

Diameter =  $\boxed{48 \text{ in}}$   
 $\frac{\text{Diameter}}{2} = 2(24)$