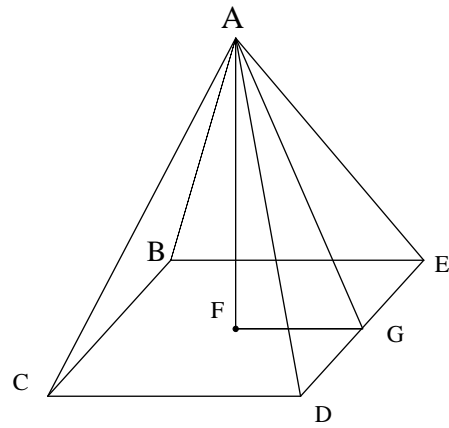


Area and Volume Finals Review!

1. Name the following:

- a. Slant height \overline{AG}
- b. Altitude \overline{AF}
- c. Lateral edge \overline{AD}
- d. Base $BECD$
- e. Lateral face $\triangle ACD$



2. Find the volume of a regular tetrahedron with sides of length 24.

$$1152\sqrt{2} u^3$$

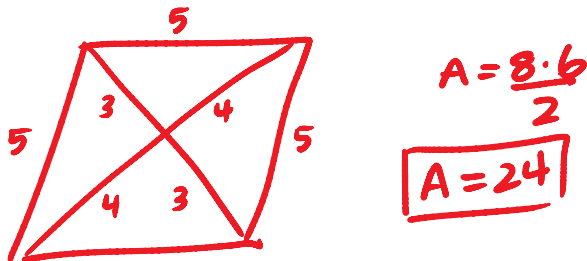
3. The ratio of the diagonals of a kite is 3:4. If the area of the kite is 150, find the longer diagonal.

$$\frac{3x \cdot 4x}{2} = 150 \quad 12x^2 = 300 \quad 4(5) = \boxed{20}$$

$$x^2 = 25$$

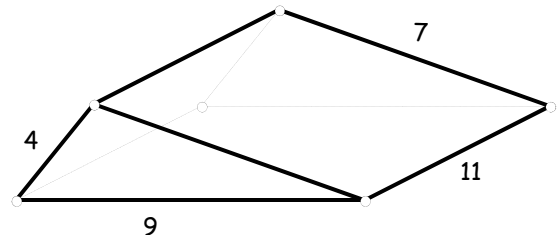
$$x = \pm 5$$

4. Find the area of a rhombus whose perimeter is 20 and whose longer diagonal is 8



5. What is the total surface area of the figure?

- a. $66\sqrt{5}$
- b. 220
- c. $6\sqrt{5} + 220$
- d. $12\sqrt{5} + 220$
- e. 248



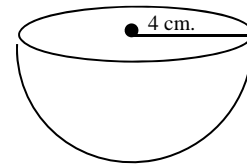
6. Find the volume and surface area of the hemisphere.

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

$$V = \boxed{\frac{128\pi}{3}}$$

$$SA = 2\pi(4)^2 + \pi(4)^2$$

$$= \boxed{48\pi}$$



7. Given: Altitude = 12, Dimensions of the base are CD = 10 and DE = 18.

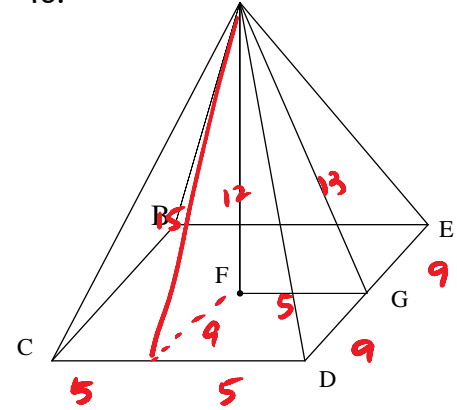
a. Find the slant height **13 and 15**

b. Find the lateral edge **$5\sqrt{10}$**

c. Find the Total Surface Area **$A_{\Delta_1} = 117$**
 $A_{\Delta_2} = 75$
T.S.A = 564

d. Find the Volume

$$V = \frac{180 \cdot 12}{3} = \boxed{720 \text{ u}^3}$$

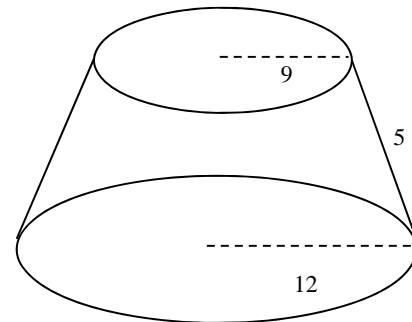


8. Find the volume and total surface area of the frustum

See your notes..

$$V = 444\pi$$

$$TSA = 330\pi$$



9. Find the Total Surface Area and the Volume

$$L.S.A_{\text{cone}} = 156\pi$$

$$L.S.A_{\text{cyl}} = 192\pi$$

$$T.S.A = 492\pi$$

$$Vol_{\text{cyl}} = 1152\pi$$

$$Vol_{\text{cone}} = 240\pi$$

$$Vol_{\text{tot}} = 1392\pi$$

