GSE Geometry | 5 – Circles: Segments & Volume | 5.5 – Notes

Name: _____ Date: _____

Volume

Volume of Prisms & Cylinders

$$V = B \cdot h$$

Base ↓ ; ↑ height from base to base

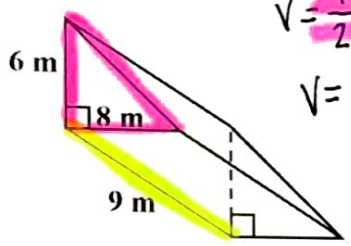
Base: The shape that there is exactly two of.

Rectangular base: $A = \ell \cdot w$ → Rectangular Prism

Triangular base: $A = \frac{1}{2}bh$ → Triangular prism

Circular base: $A = \pi r^2$ → Cylinder

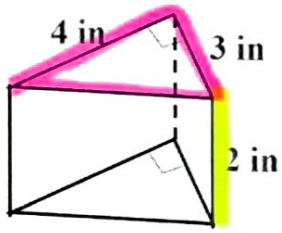
1. $V =$ _____



$V = \frac{1}{2}(8)(6)(9)$

$V = 216 m^3$

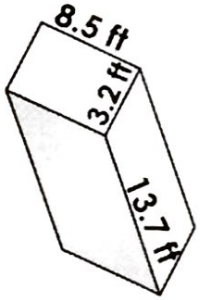
2. $V =$ _____



$\frac{1}{2}(3)(4)\cdot(2)$

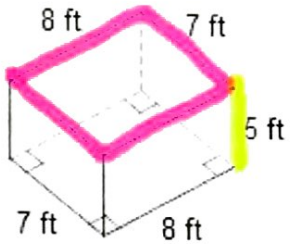
$= 12 in^3$

3. $V =$ $372.64 ft^3$



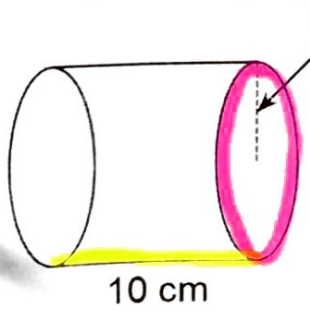
$(8.5)(3.2)(13.7)$

4. $V =$ $280 ft^3$



$(8)(7)(5)$

5. $V =$ _____

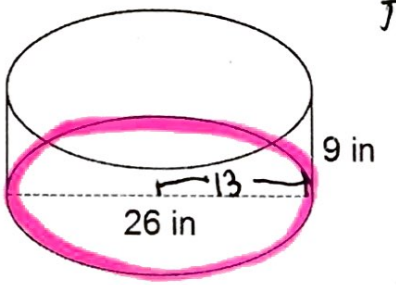


$\pi(5)^2 \cdot (10)$

$250\pi cm^3$

$\approx 785.4 cm^3$

6. $V =$ _____



$\pi(13)^2(9)$

$1521\pi in^3$

$\approx 4778.36 in^3$

Volume of Pyramids and Cones

$$V = \frac{1}{3}B \cdot h$$

↳ 1 Base ↰

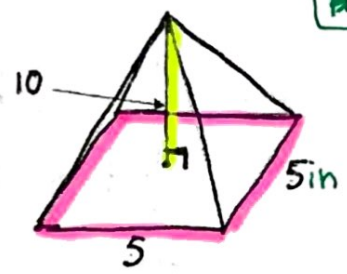
Rectangle : $A = l \cdot w$
Triangle: $A: \frac{1}{2}bh$
Circle: $A = \pi r^2$

7. $V =$ _____

$V = \frac{1}{3}(l \cdot w)(10)$

$V = \frac{1}{3}(5 \cdot 5)(10)$

$V = 83.3\ in^3$

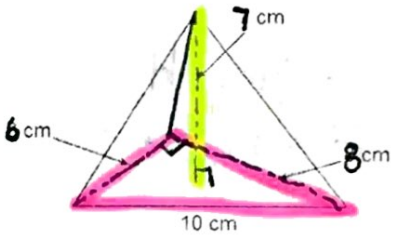


8. $V =$ _____

$V = \frac{1}{3}(\frac{1}{2}bh) \cdot h$

$V = \frac{1}{3}(\frac{1}{2})(8)(6)(7)$

$= 56cm^3$

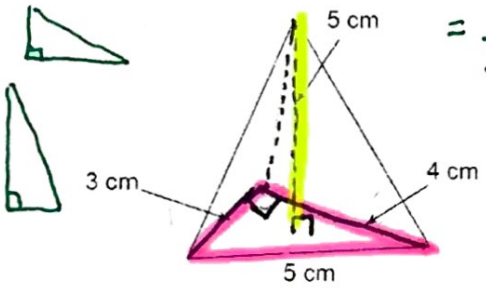


9. $V =$ _____

$V = \frac{1}{3}(\frac{1}{2}bh)H$

$= \frac{1}{3}(\frac{1}{2})(4)(3)(5)$

$= 10cm^3$



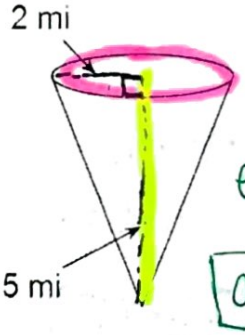
10. $V =$ _____

$V = \frac{1}{3}(\pi r^2) \cdot H$

$V = \frac{1}{3}(\pi(2)^2)(5)$

exact $\approx \frac{20\pi}{3} \approx 6.\overline{6}\pi$

approx $\approx 20.9\ m^3$



11. $V =$ _____

$V = \frac{1}{3}(\pi r^2) \cdot H$ (Pyth. Thm)

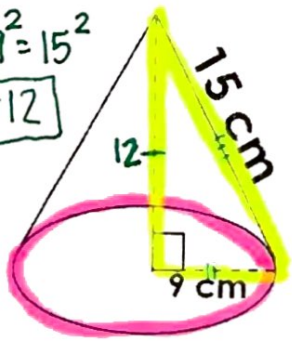
$= \frac{1}{3}(\pi(9)^2)(12)$

exact $= 324\pi$

$\approx 1017.9cm^3$

$a^2 + 9^2 = 15^2$

$a = 12$



12. $V =$ _____