

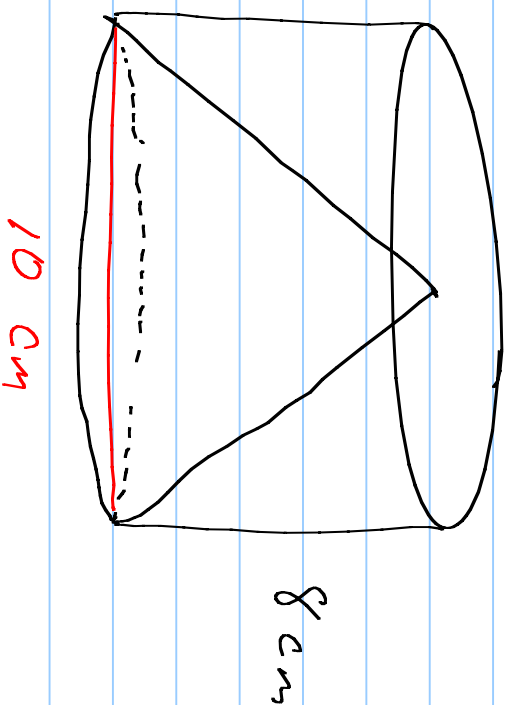
VOLUME

Note Title

12/19/2012

IS FIND THE VOLUME OF THE CYLINDER AND THE

CONE



VOLUME OF CYLINDER = AREA OF BASE \times HEIGHT

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

$$= (3.14)(5)^2(8)$$
$$= 628 \text{ cm}^3$$

CONE = $\frac{1}{3}$ (AREA OF BASE) \times HEIGHT

$$= \frac{1}{3} \pi r^2 h$$

$$= \frac{1}{3} (628)$$

$$= 209.3 \text{ cm}^3$$

EX FIND THE VOLUME OF A SPHERE WITH RADIUS

10 cm

SOLN

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

$$V = \frac{4}{3} (3.14) (10)^3$$

$$\begin{aligned} &= 10^3 \times 3.14 \times 4 \div 3 \\ &= 4186.67 \text{ cm}^3 \end{aligned}$$

WORKING BACKWARDS

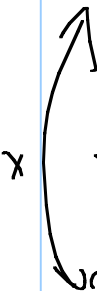
— FIND THE RADII

A) VOLUME OF A CYLINDER IS 3815.1 m^3 WITH

A HEIGHT OF 15 m

B) VOLUME OF CONE IS 314 mm^3 $H = 12 \text{ mm}$

Solve A) $V = \pi r^2 h$

$$3815.1 = (3.14) (r)^2 (15)$$


$$\frac{3815.1}{47.1} = \frac{\cancel{47.1} r^2}{\cancel{47.1}}$$

$$81 = r^2$$

$$\sqrt{81} = r$$

$$9 = r$$

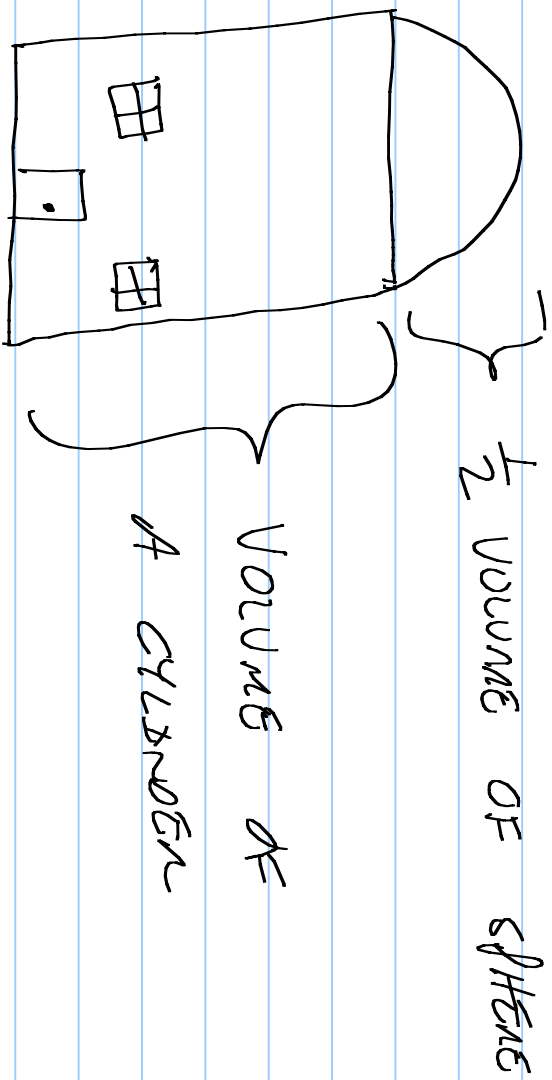
b) soln $V = \frac{1}{3} \pi r^2 h$

$$314 = \frac{1}{3} (3.14) (r)^2 (12) \quad 12 \times 3.14 \times \frac{1}{3}$$

$$\frac{314}{12.56} = \frac{\cancel{12.56} r^2}{\cancel{12.56}}$$

$$25 = r^2$$

$$S_m = r$$



Hlw R₁ 86 # 1-5, 11, 14