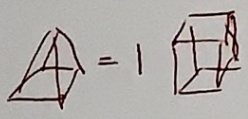
MTH 1W Quiz Name Solutions

3  = 1

1. Fill in the blank.

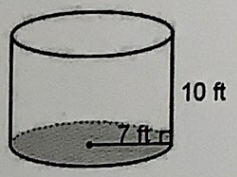
a) A rectangular based prism has a volume of 75 cm^3.

A rectangular based pyramid with the same dimensions has a volume of ~~225~~ 25. cm^3.

b) A cone has a volume of 240 m^3.

A cylinder with the same dimensions has a volume of 720 cm^3.

2. Calculate the volume of a cone that just fits inside the cylinder shown.



$V_{cylinder} = \pi r^2 h$

$= \pi(7)^2(10)$

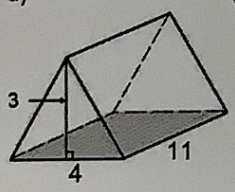
$\doteq 1539.4\ ft^3$

$\therefore V_{cone} = \frac{1539.4}{3}$

$\doteq 513.1\ ft^3$

3. Determine the Volume Show your work.

a)

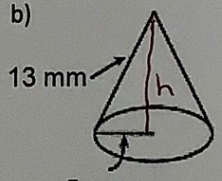


$V = \text{Area of base} \times h$

$= \frac{3 \times 4}{2} \times 11$

$= 66\ units^3$

b)

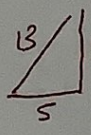


Need h.

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

$= \frac{\pi(5)^2(12)}{3}$

$\doteq 314.2\ mm^3$



$13^2 = h^2 + 5^2$

$13^2 - 5^2 = h^2$

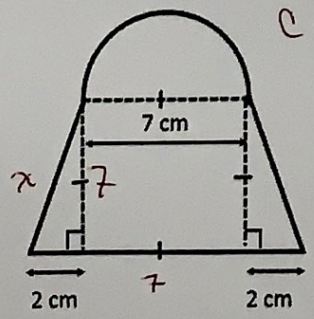
$169 - 25 = h^2$

$144 = h^2$

$\pm 12 = h$

$\therefore h > 0 \quad h = 12$

4. Find the perimeter.



$C = \frac{\pi d}{2}$

$= \frac{\pi(7)}{2}$

$\doteq 11\ cm$

$x^2 = 7^2 + 2^2$

$= 49 + 4$

$= 53$

$x = \sqrt{53}$

$\doteq 7.3\ cm$

$P = 11 + 2(7.3) + 7 + 2 + 2$

$= 36.6\ cm.$

5. Fill in the blanks.

a) 35 m = 3500 cm (2 spaces right)

b) 12 mg = 0.12 dg (2 spaces left)

c) 17 in. = 43.18 cm (×2.54)

d) 480 g = 16.9 oz (÷ 28.35)

e) 9 cups = 2160 ml (×240)

f) 5L = 5.2 quarts

5000 mL = ÷960