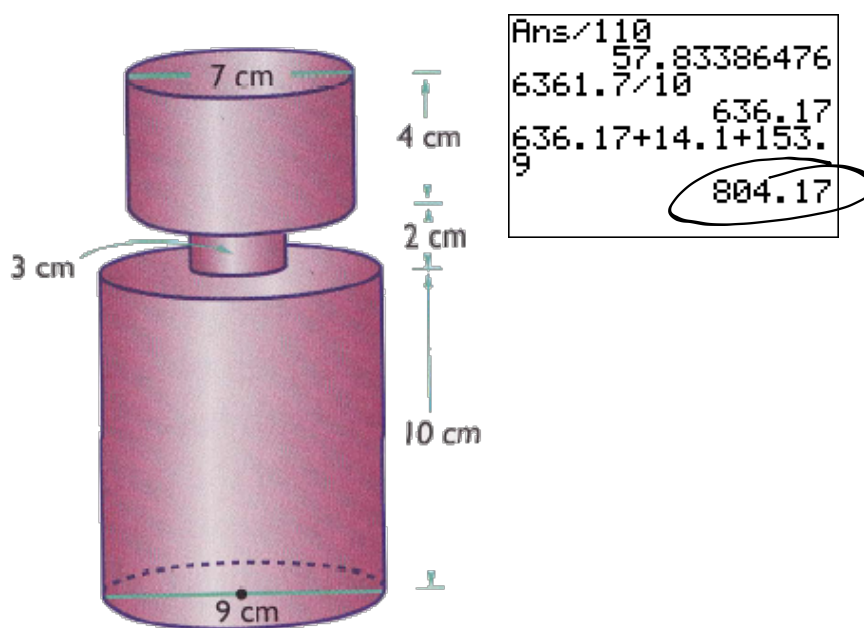


WARM-UP Find the volume of each figure... $V = \pi r^2 h$



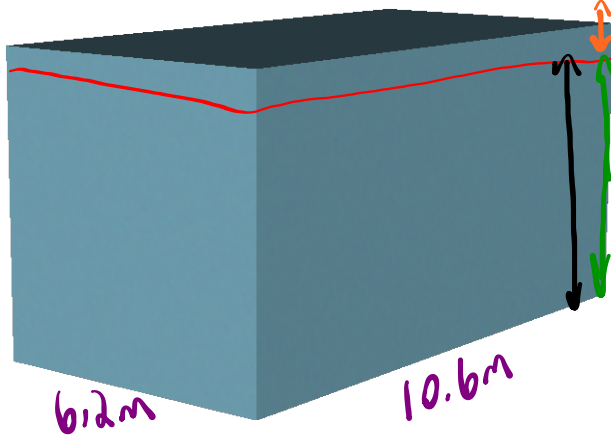
Hw??? #7, 8

7 A rectangular pool has dimensions 10.6 m long, 6.2 m wide and 2.1 m deep.

(a) The water level is 22.5 cm below the edge of the pool. Calculate the volume of water in the pool.

(b) Each day it costs 3.29¢/m³ to maintain the pool. Calculate the total cost of maintaining the pool from May 24 to September 18.

118 days



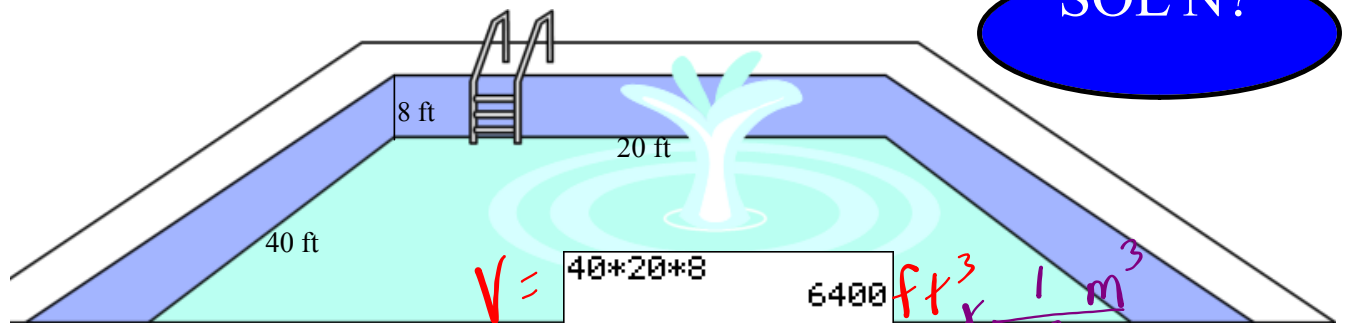
a) $V = lwh$
 $= 6.2(10.6)(1.875)$
 $V = 123.225 \text{ m}^3$

Cost = $123.225 \times 3.294 \times 118$

| | |
|---|----------------|
| = | 6.2*10.6*1.875 |
| | 123.225 |
| | Ans*3.29*118 |
| | 47838.4095 |
| | Ans/100 |
| | 478.384095 |

TRY THIS ONE...

A swimming pool needs to be filled with water. It costs \$0.005/L to fill the pool. How much will it cost to fill the rest of the swimming pool?



Handwritten calculations:

$$V = 40 * 20 * 8 = 6400 \text{ ft}^3$$

$$6400 \text{ ft}^3 \times \frac{1 \text{ m}^3}{35.3147 \text{ ft}^3} = 181.234 \text{ m}^3$$

$$V = 181.234 \text{ m}^3 \times \frac{1000 \text{ L}}{1 \text{ m}^3} = 181234 \text{ L}$$

$$\text{Cost} = 181234 \times 0.005 = \text{\$}906.17$$

ANOTHER EXAMPLE...

19. A fitness ball is delivered in a flat package with a hand pump. The pump inflates the ball at a rate of 280 cm^3 per pump, to a diameter of 28 cm. How many pumps are needed to inflate the ball? Justify your answer.

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



$$V = \frac{4}{3}(14)^3\pi$$

$$= 11494.04032$$

$$= 11494.$$

$$\# \text{ of pumps} = \frac{11494}{280}$$

$$= 41.05$$

$$\Rightarrow 42 \text{ pumps}$$



19. 42 pumps

ONE MORE...

A pail of cookie dough is cylindrical, with diameter 17 cm and height 13 cm. A scoop makes a sphere of cookie dough with diameter 5 cm. How many cookies can be made from this pail of dough?

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

$$= \pi (17/2)^2 * 13$$

2950.7409

$$V_{\text{sphere}} = \frac{4}{3} \pi r^3$$

$$= \frac{4}{3} \pi (2.5)^3$$

65.44984695

of cookies $\rightarrow \frac{2950.74}{65.45}$



20.45 cookies

1.6 Surface Area and Volume of a Sphere



HOMEWORK...

 Worksheet - Applications SA and Volume (6.1 - 6.4).pdf

Unit Test on Surface Area & Volume on
THURSDAY!!!

Attachments

Worksheet - Applications SA and Volume (6.1 - 6.4).pdf