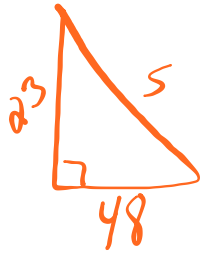
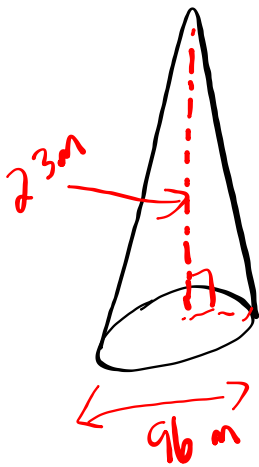


HW???

4. A grain stockpile cover in the shape of a cone has a diameter of 96 m and a height of 23 m. How much material is needed for the cover?

$$SA = \pi r s$$

- b) A one-gallon can of the stain that Darcy is using covers approximately 225 ft². If Darcy applies 2 coats of stain, how many cans of stain should he buy?



a)

$$s^2 = 23^2 + 48^2$$

$$s = 53.2$$

$$SA = \pi (48) (53.2)$$

$$SA = 8026.3 \text{ m}^2$$

$$b) \frac{8026.3 \text{ m}^2 \times 3.2808 \text{ ft}^2}{1 \text{ m}^2}$$

$$= 86392.1 \text{ ft}^2$$

$$\# \text{ of cans} = \frac{86392.1}{225}$$

$$= 383.96$$

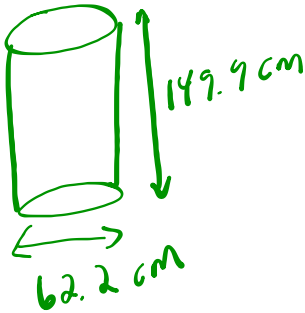
$$\times 2$$

$$\text{Two coats} \Rightarrow 768 \text{ cans}$$

4. A hot water tank consists of a heavy steel tank, a layer of insulation, and an outer shell. The outer dimensions of a cylindrical hot water tank are 62.2 cm diameter and 149.9 cm height, and the rated water capacity is 270 L.

- a) What is the total volume, in litres, of the hot water tank?
- b) Compare the total volume of the hot water tank to its rated capacity, expressed as a percent.

$$b) \frac{270}{455.5} \times 100\%$$



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

$$V = \pi (31.1)^2 (149.9)$$

$$V = \pi (31.1)^2 * 149.9$$

$$455483.1166$$

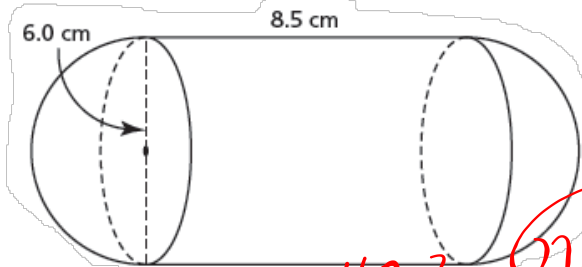
$$V = 455483.1 \text{ cm}^3 \times \frac{1 \text{ L}}{1000 \text{ cm}^3}$$

$$V = 455.5 \text{ L}$$

5. a) $273.3 \text{ cm}^2, 353.4 \text{ cm}^3$ b) $12.0 \text{ m}^2, 2.5 \text{ m}^3$

Determine the surface area and volume of each composite object.
Write the answers to the nearest tenth of a unit.

a) right cylinder and hemispheres



$$SA_{\text{TOTAL}} \Rightarrow 113.1 + 160.2 = 273.3 \text{ cm}^2$$

$$SA_{\text{sphere}} = 4\pi r^2$$

$$= 4\pi(3)^2$$

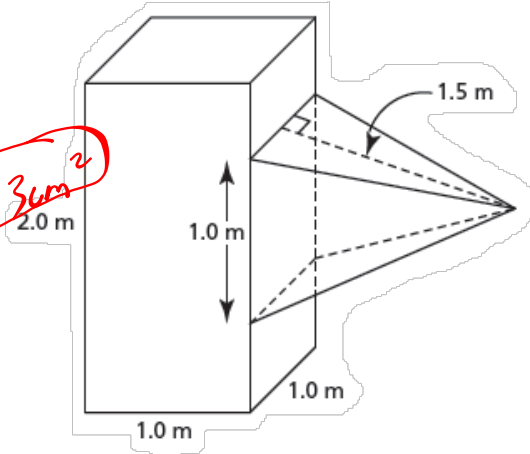
$$= 113.1 \text{ cm}^2$$

$$SA_{\text{cylinder}} = 2\pi r h$$

$$= 2\pi(3)(8.5)$$

$$= 160.2 \text{ cm}^2$$

b) right square prism and right square pyramid



1.7 Solving Problems Involving Objects

$$V_{\text{TOTAL}} \Rightarrow 353.4 \text{ cm}^3$$

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

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

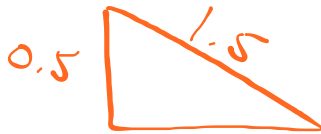
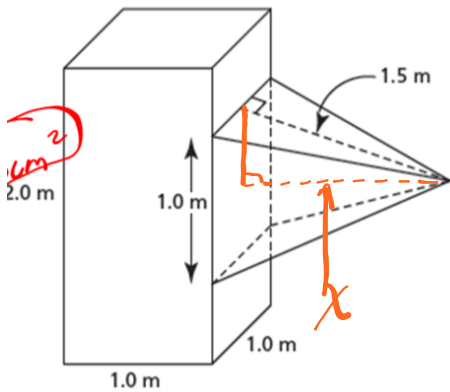
$$= 113.1 \text{ cm}^3$$

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

$$= \pi(3)^2(8.5)$$

$$= 240.3 \text{ cm}^3$$

b) right square prism and right square pyramid



$$\sqrt{x^2} = \sqrt{1.5^2 - 0.5^2}$$

$$x = 1.4$$

Prism:

$$2(1 \times 1) + 4(1 \times 2)$$

$$9 \text{ m}^2$$

$$SA_{TOTAL} = 9 + 3 = 12 \text{ m}^2$$

Pyramid: $\frac{2}{3} \left(\frac{1 \times 1.5}{2} \right)$

$$3 \text{ m}^2$$

$$V_{prism} \Rightarrow 1 \times 1 \times 2 = 2 \text{ m}^3$$

$$V_{pyramid} \Rightarrow \frac{(1 \times 1) \times 1.4}{3} = 0.47 \text{ m}^3$$

$$V_{total} \Rightarrow 2.47 \text{ m}^3$$

HOMEWORK...

 Worksheet - More Applications SA, Vol & Capacity.pdf

Unit Test is now on Friday!

 Chapter 6 Sample Test.pdf

 Chapter 6 Sample Test Answers.pdf

Attachments

[Chapter 6 Sample Test Answers.pdf](#)

[Chapter 6 Sample Test.pdf](#)

[Worksheet - More Applications SA, Vol & Capacity.pdf](#)