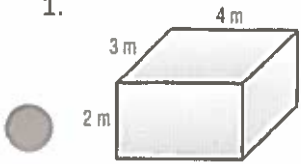


1.



Surface Area



$$A = b \times h = 2 \times 4 = 8 \text{ m}^2 \times 2 = 16 \text{ m}^2$$

$$A = b \times h = 3 \times 4 = 12 \text{ m}^2 \times 2 = 24 \text{ m}^2$$

$$A = b \times h = 2 \times 3 = 6 \text{ m}^2 \times 2 = 12 \text{ m}^2$$

$$= 16 \text{ m}^2 + 24 \text{ m}^2 + 12 \text{ m}^2$$

$$SA = 16 + 24 + 12$$

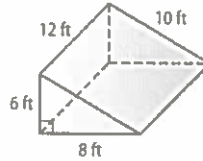
$$SA = 52 \text{ m}^2$$

Volume

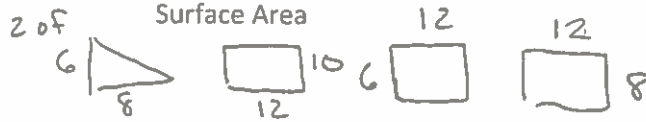
$$V = l \times w \times h$$

$$V = 24 \text{ m}^3$$

2.



Surface Area



$$A = \frac{b \times h}{2} \times 2$$

$$A = b \times h$$

$$SA = 48 + 120 + 72 + 96$$

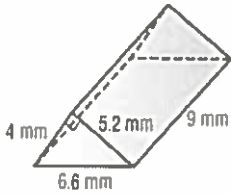
$$SA = 336 \text{ ft}^2$$

Volume

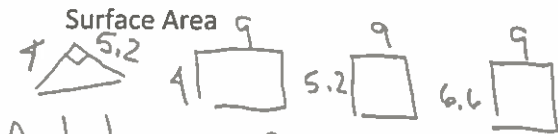
$$V = \frac{b \times h}{2} \times l p$$

$$V = 288 \text{ ft}^3$$

3.



Surface Area



$$A = \frac{b \times h}{2} \times 2$$

$$A = b \times h$$

$$SA = 20.8 + 36 + 46.8 + 59.4$$

$$SA = 163 \text{ mm}^2$$

Volume

$$V = \frac{b \times h}{2} \times l p$$

$$V = 93.6 \text{ mm}^3$$

4.



Surface Area

$$SA = 2\pi r h + 2\pi r^2$$

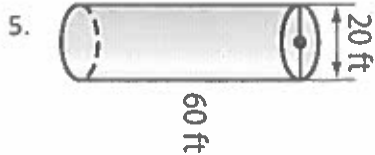
$$= 125.66 + 25.13$$

$$SA = 150.79 \text{ ft}^2$$

Volume

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

$$V = 125.66 \text{ ft}^3$$



Surface Area

$$SA = 2\pi rh + 2\pi r^2$$

$$= 3769.91 + 628.32$$

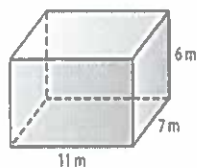
$$SA = 4398.23 \text{ ft}^2$$

Volume

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

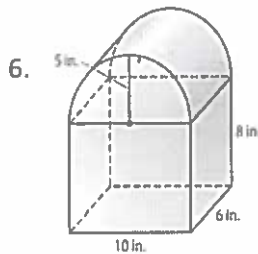
$$V = 18849.56 \text{ ft}^3$$

Determine the surface area of JUST the top and base.



$$A = b \times h$$

$$SA = 154 \text{ m}^2$$



Surface Area

$$SA = 2\pi rh + 2\pi r^2$$

$$= 188.5 + 157.08$$

$$= 345.58 \text{ in}^2$$

$$\therefore 2SA = 172.79 \text{ in}^2$$



$$A = b \times h$$

$$SA = 80 * 2 = 160$$

$$+ 60$$

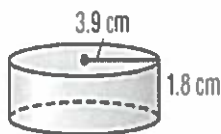
$$48 * 2 = 96$$

$$\hline 316 \text{ in}^2$$

$$SA = 172.79 + 316$$

$$SA = 488.79 \text{ in}^2$$

Determine the surface area of the cylinder without the top.

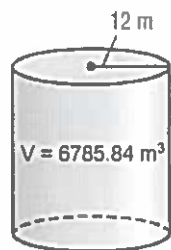


$$SA = 2\pi rh + \pi r^2$$

$$44.11 + 47.78$$

$$SA = 91.89 \text{ cm}^2$$

Determine the height.



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

$$6785.84 = \pi (12^2) h$$

$$h = 15 \text{ m}$$

Determine the surface area of a cylindrical tank with a height of 12 m and a diameter of 10 m.

$$SA = 2\pi rh + 2\pi r^2$$

$$376.99 + 157.08$$



$$SA = 534.07 \text{ m}^2$$

Determine the height of a cube with a surface area of 486 cm²

$$SA = 6(h \times h)$$

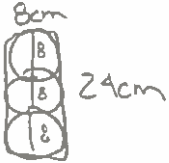
$$486 = 6(h^2)$$

$$81 = h^2$$

$$h = 9 \text{ cm}$$

Three identical tennis balls with a diameter of 8cm are stacked three high in a cylindrical container.

a. What is the volume of the container?



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

$$V = 1206.37 \text{ cm}^3$$

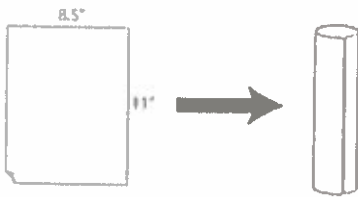
b. Surface area?

$$SA = 2\pi rh + 2\pi r^2$$

$$603.19 + 100.53$$

$$SA = 703.72 \text{ cm}^2$$

Determine which cylinder holds more. Fill out the chart with your known information.



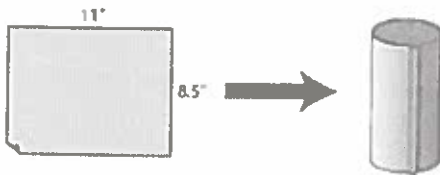
$$C = 2\pi r$$

$$C = 8.5$$

$$r = 1.35$$

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

$$V = 62.98 \text{ in}^3$$



$$11 = 2\pi r$$

$$r = 1.75$$

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

$$V = 81.78 \text{ in}^3$$

DIMENSION	CYLINDER A	CYLINDER B
HEIGHT (in.)	11 in	8.5 in
DIAMETER (in.)	2.7 in	3.5 in
RADIUS (in.)	1.35 in	1.75 in

Cylinder B holds more

