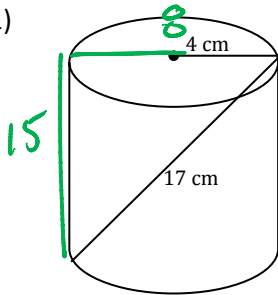


Surface Area of Prisms and Cylinders
Homework

Name _____

Find the lateral and surface area of each figure.

1)



a) Lateral Area:

$$LA = (8\pi)15$$

$$= 120\pi \text{ cm}^2$$

b) Surface Area:

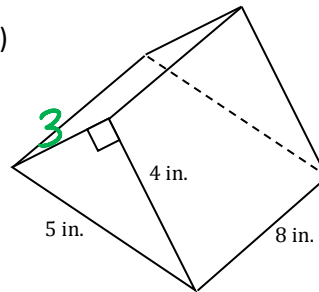
$$SA = 120\pi + 2(\pi 4^2)$$

$$= 120\pi + 2(16\pi)$$

$$= 120\pi + 32\pi$$

$$= 152\pi \text{ cm}^2$$

2)



a) Lateral Area:

$$LA = (3+4+5)8$$

$$= (12)8$$

$$= 96 \text{ in}^2$$

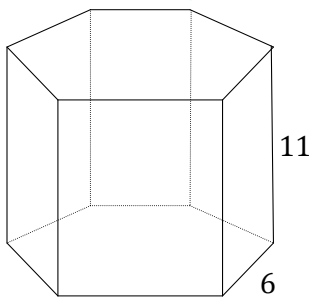
b) Surface Area:

$$SA = 96 + 2\left(\frac{3 \cdot 4}{2}\right)$$

$$= 96 + 12$$

$$= 108 \text{ in}^2$$

3)



$$\frac{6^2\sqrt{3}}{4}$$

$$\frac{36\sqrt{3}}{4} = (9\sqrt{3})6$$

$$= 54\sqrt{3}$$

a) Lateral Area:

$$LA = (6 \cdot 6)11$$

$$= (36)11$$

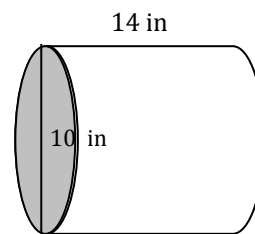
$$= 396$$

b) Surface Area:

$$SA = 396 + 2(54\sqrt{3})$$

$$= 396 + 108\sqrt{3}$$

4)



a) Lateral Area:

$$LA = (10\pi)14$$

$$= 140\pi \text{ in}^2$$

b) Surface Area:

$$SA = 140\pi + 2(\pi 5^2)$$

$$= 140\pi + 2(25\pi)$$

$$= 140\pi + 50\pi$$

$$= 190\pi \text{ in}^2$$