

The surface area of a cylinder is 48π square feet. The radius of the cylinder is 3 feet. What is the height of the cylinder?

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

$$48\pi = 2\pi(3)^2 + 2\pi(3)h$$

$$48 = 18 + 6h$$



$$36 = 6h$$

$h = 6$

A regular hexagonal prism has an apothem of 8.3 cm, sides of 5 cm and a prism height of 12 cm. What is the surface area of the figure?

$$SA = 2B + LA$$

$$2\left(\frac{1}{2}(8.3)(5 \times 6)\right) + (5 \times 12 \times 6)$$

$$249 + 360 = \boxed{609 \text{ cm}^2}$$

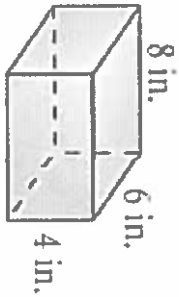
The volume of a right cylinder is 3600π cm^3 and the height is 16 cm. What is the radius of the cylinder?

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

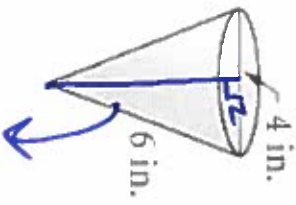
$$3600\pi = \pi r^2(16)$$

$$r^2 = 225$$

$r = 15 \text{ cm}$



Surface Area	<u>208 in²</u>	32
		32
		24
		24
Volume	<u>6 × 8 × 4 = 192 in³</u>	48
		48



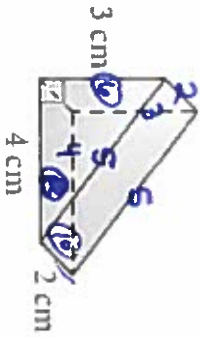
$$36 = r^2 + h^2$$

$$h^2 = 32$$

$$h = 5.6569$$

Area of Base	<u>4π in²</u>	12π in ²
Lateral Area	<u>12π in²</u>	12π in ²
Surface Area	<u>24π in²</u>	11π in ²
Volume	<u>7.54π in³</u>	7.54π in ³

$$V = \frac{\pi r^2 h}{3} = \frac{\pi(4)(6)}{3}$$

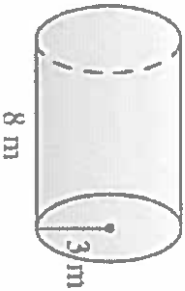


Area of Base $\frac{6 \text{ cm}^2}{2} = \frac{1}{2}(3)(4)$

Lateral Area $24 \text{ cm}^2 = 10 + 6 + 8 = 24$

Surface Area $6 + 6 + 24 = 36 \text{ cm}^2$ $13 + 44$

Volume $V = B \cdot h = 6(2) = 12 \text{ cm}^3$



Area of Base $9\pi \text{ m}^2$

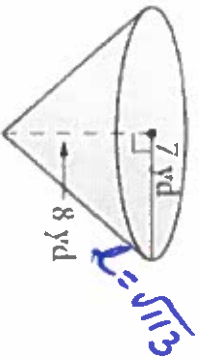
Lateral Area $2\pi r h = 2\pi(3)(8) = 48\pi \text{ m}^2$

Surface Area $9\pi + 48\pi = 2B + LA = 66\pi \text{ m}^2$

Volume $72\pi \text{ m}^3$

$V = \pi r^2 h$

$\pi(9)(8)$



Area of Base $\underline{49\pi \text{ yd}^2}$

Lateral Area $\approx 74.4\pi \text{ yd}^2$ $\pi r \ell = \pi(7)$

Surface Area $\approx 123.4 \text{ yd}^2$ $\pi r^2 + \pi r \ell$

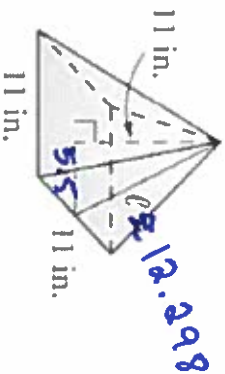
Volume $\approx 130.7 \text{ yd}^3$ $\frac{\pi r^2 h}{3}$
 $\frac{392}{3} \text{ yd}^3$

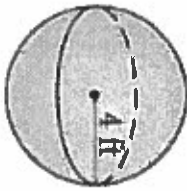
Area of Base $\underline{121 \text{ in}^2}$

Lateral Area $\approx 270.4 \text{ in}^2$ $\frac{1}{2} b \ell \times 4$

Surface Area $\approx 391.4 \text{ in}^2$ $= 1B + LA$

Volume $\frac{1331}{3} \approx 443.7 \text{ in}^3$ $V = \frac{B \cdot h}{3}$





Surface Area $64\pi \text{ ft}^2$

Volume $85.3\pi \text{ ft}^3$

$\frac{256}{3}\pi \text{ ft}^3$

Area of Base $64\pi \text{ in}^2$

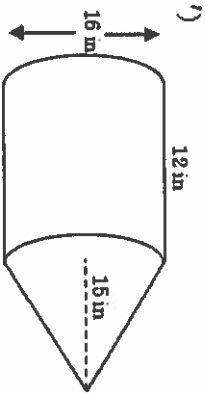
Height of Cylinder 12 in

Slant Height of Cone 17

Lateral Area $136\pi + 142\pi + 328\pi$
 $\pi(8)(12) + 2\pi(8)(12)$

Surface Area $328\pi + 64\pi$ $= 392\pi \text{ in}^2$

Volume $V_{\text{cyl}} + V_{\text{cone}}$ $= 768\pi + 320\pi$
 $\frac{\pi(8)^2(12)}{3} + \frac{\pi(8)^2(15)}{3} = 1088\pi \text{ in}^3$

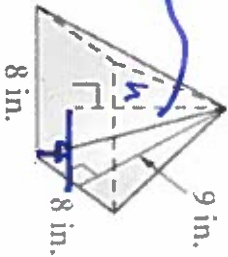


$328\pi \text{ in}^2$

$$q^2 = 4^2 + k^2$$

$$k^2 = 45$$

$$k = 8.0623$$



Area of Base 64 in²

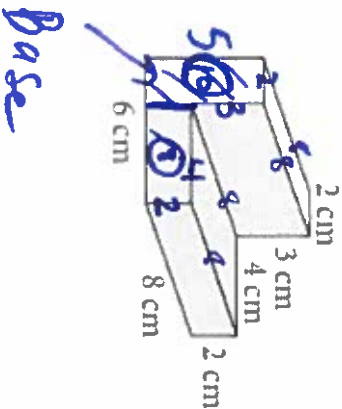
Lateral Area 144 in²

Surface Area 208 in²

Volume 171.99 in³

$$V = \frac{64(8.0623)}{3}$$

$$\frac{1}{2}(8)(9)xy$$



Area of Base 18 cm²

Height of Prism 8 cm

Surface Area 218 cm²

Volume 144 cm³

F: 18
B: 18

~~Area~~
Left: 40

Bottom: 48

Top: 16

Top: 32

Right: 1

Right: 2

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