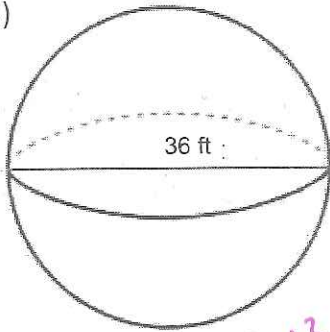


13)



$$r = 18 \text{ ft}$$

$$S.A. = 4\pi(18 \text{ ft})^2$$

$$V = \frac{4}{3}\pi(18 \text{ ft})^3$$

Exact

#13 S.A. answer:

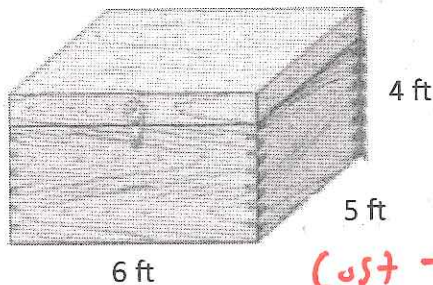
$$1,296\pi \text{ ft}^2$$

Exact

#13 Vol. answer:

$$7,776 \text{ ft}^3$$

15) You are building a storage box out of plywood using the dimensions shown. Plywood costs \$1.50 per square foot. Evaluate the total cost of the plywood. Show all of your work and don't forget units!!



$$\begin{aligned} T \& B = 2(5 \text{ ft} \cdot 6 \text{ ft}) &= 60 \text{ ft}^2 \\ L \& R = 2(4 \text{ ft} \cdot 5 \text{ ft}) &= 40 \text{ ft}^2 \\ F \& Bk = 2(4 \text{ ft} \cdot 6 \text{ ft}) &= 48 \text{ ft}^2 \\ S.A. &= 148 \text{ ft}^2 \end{aligned}$$

$$\text{Cost} \rightarrow \frac{\$1.5}{\text{ft}^2} \cdot \frac{148 \text{ ft}^2}{1}$$

#15 answer:

$$\underline{\$222}$$

For 16 & 17, a cereal box has a surface area of 175 in^2 and a volume of 300 in^3 . A second cereal box is 3 times larger in every dimension. Show your work and use units.

16) Evaluate the surface area of the second cereal box.

$$S.A. \rightarrow 3^2 \cdot 175$$

#16 answer:

$$\underline{1,575 \text{ in}^2}$$

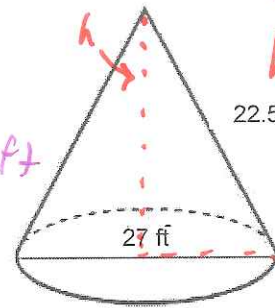
17) Evaluate the volume of the second cereal box.

$$V \rightarrow 3^3 \cdot 300$$

#17 answer:

$$\underline{8,100 \text{ in}^3}$$

14)



$$r = 13.5 \text{ ft}$$

$$h^2 + 13.5^2 = 22.5^2$$

$$h^2 + 182.25 = 506.25$$

$$h^2 = 324$$

$$h = 18 \text{ ft}$$

$$S.A. = \pi(13.5 \text{ ft})(22.5 \text{ ft}) + \pi(13.5 \text{ ft})^2$$

$$S.A. = 303.75\pi \text{ ft}^2 + 182.25\pi \text{ ft}^2$$

$$V = \frac{1}{3} \cdot \pi(13.5 \text{ ft})(18 \text{ ft})$$

Exact

#14 S.A. answer:

$$486\pi \text{ ft}^2$$

Exact

#14 Vol. answer:

$$81\pi \text{ ft}^3$$