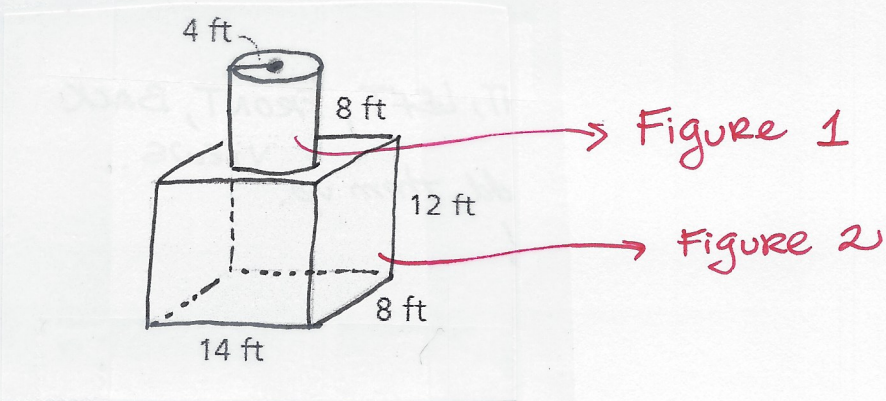

S_A Figure 1 → Cylinder height = 8 ft, Radius = 4 ft

$$S_A = 2\pi r^2 + (2\pi r \times \text{height})$$
$$= 2 \times \pi \times (4)^2 ft^2 + (2 \times \pi \times 4\ ft \times 8\ ft)$$
$$= 100.53\ ft^2 + 201.06\ ft^2$$
$$S_{A\ Fig\ 1} = 301.59\ ft^2$$

Figure 2

S_A Front, back $= 2 \times (14\ ft \times 12\ ft) = 336\ ft^2$

S_A Right, Left $= 2 \times (12\ ft \times 8\ ft) = 192\ ft^2$

S_A top, Bottom $= 2 \times (14\ ft \times 8\ ft) = 112\ ft^2$

$640\ ft^2$

$$S_{A\ Fig\ 2} = 640\ ft^2$$

Overlap

the overlap is the bottom circle of Fig. 1:

$$\text{Overlap} = 2 \times \pi r^2$$
$$= 2 \times \pi \times (4\ ft)^2 = 25.13\ ft^2$$

So

answer

Total Area = Area of Fig. 1 + Area of Fig. 2 − Overlap

Total Area $= 301.6\ ft^2 + 640\ ft^2 - 25.13\ ft^2 = 916.5\ ft^2$