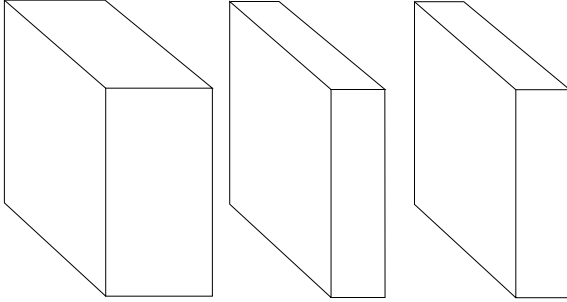


$$7. A = 6[10 \times 10] + 4[10 \times 5] + 8[10 \times 2.5] = 1000 \text{ cm}^2$$



$$8. A = 23 \text{ cm}^2$$

Solⁿ:

$$V = Bh \Rightarrow B = \frac{V}{h} = \frac{7.54}{3.266} = 2.3 \text{ cm}^2$$

$$A = 10 \times 2.3 = 23 \text{ cm}^2$$

$$9. V = V_{\text{bucket}} - V_{\text{rock}}$$

$$V = 25 \times 25 \times 40 - \frac{4}{3}\pi(10)^3$$

$$V = 20811.2 \text{ cm}^3$$

$$10. A = 10 \times \pi(12)(37) = 13948.7 \text{ cm}^2$$

$$11. \text{Price} = \$760; V = 160 \text{ m}^3$$

Solⁿ:

$$A = 10 \times 8 + 2(10 \times 2 + 8 \times 2) = 152 \text{ m}^2$$

$$\text{Price} = A \times \text{Cost} = 152 \times 5 = 760$$

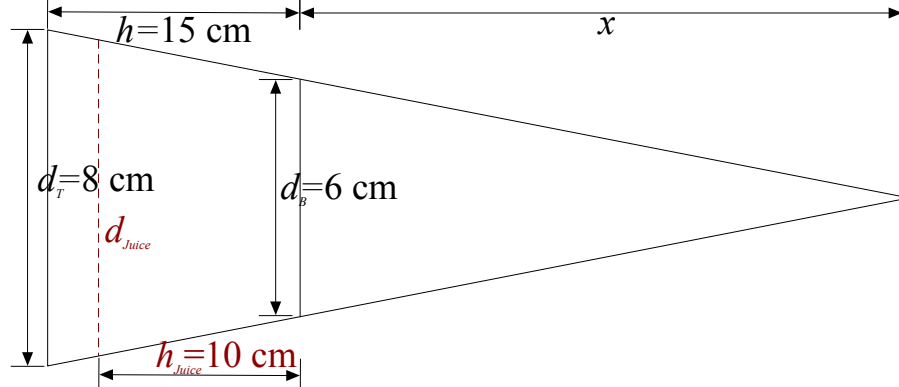
$$V = 10 \times 8 \times 2 = 160 \text{ m}^3$$

12. Jessica has $128\pi \text{ cm}^3$ of juice, and Christy has $111.48\pi \text{ cm}^3$. Jessica has more. (the height of the cone that is cut off is 45 cm, and the diameter of the ring where the top of the juice is 7.3 cm)

Solⁿ:

$$V_{\text{cylinder}} = 4^2\pi(8) = 128\pi \text{ cm}^3$$

To find Volume of Frustum:



$$\frac{x}{6} = \frac{15 + x}{8} \Rightarrow x = 45$$

$$\frac{d_{\text{Juice}}}{10 + 45} = \frac{6}{45} \Rightarrow d_{\text{Juice}} = 7.3 \text{ cm}$$

$$V_{\text{frustum}} = V_{\text{big cone}} - V_{\text{small cone}} = \frac{1}{3}\pi\left[\left(\frac{7.3}{2}\right)^2(55) - 3^2(45)\right] = 111.48\pi \text{ cm}^3$$