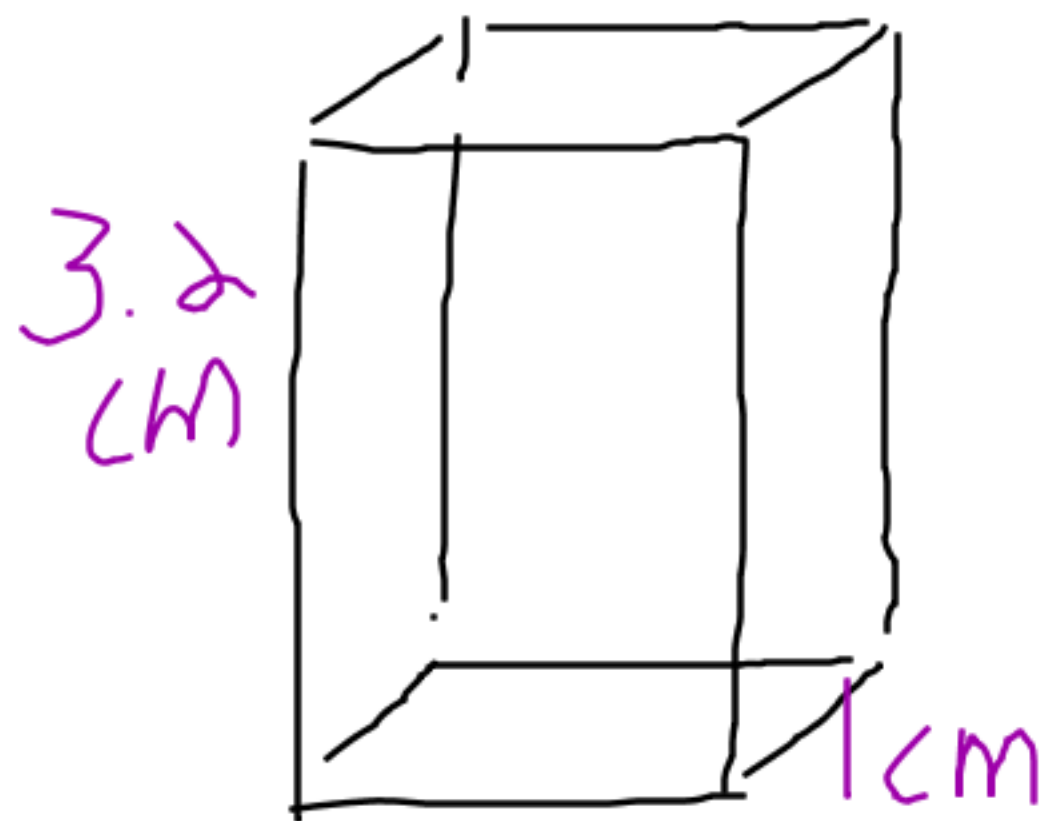
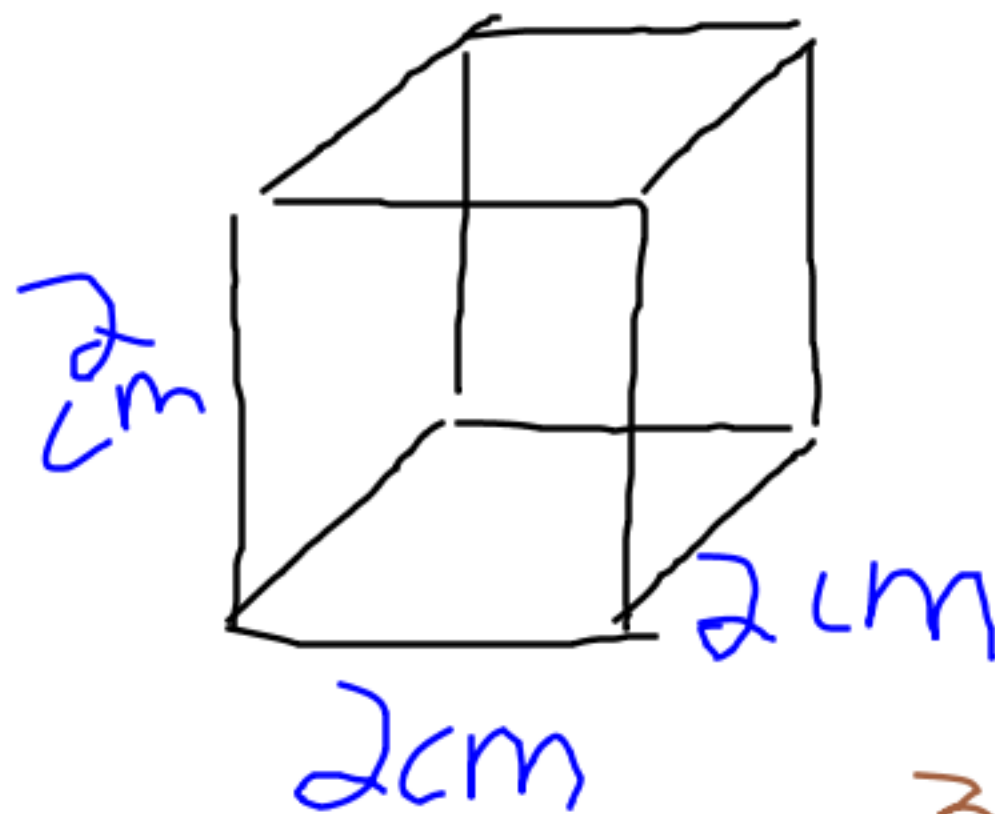




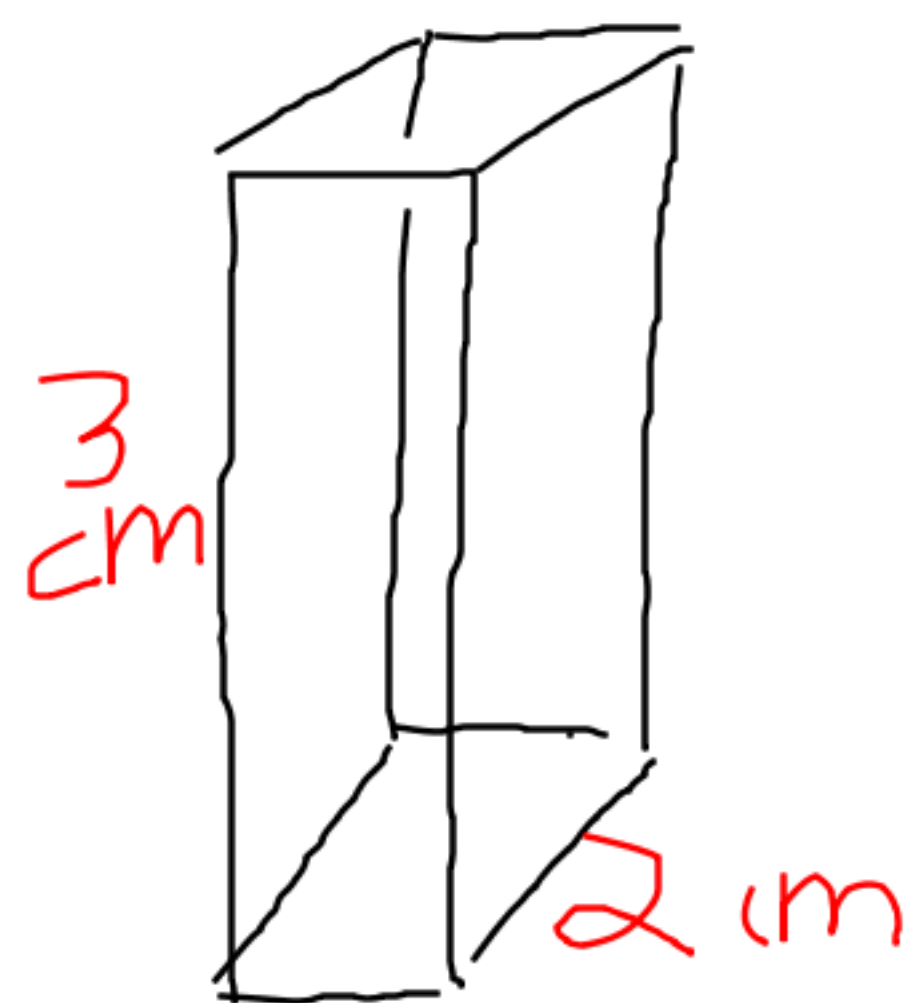
$$V = 8 \text{ cm}^3$$

$$SA = 27.4 \text{ cm}^2$$



$$V = 8 \text{ cm}^3$$

$$SA = 24 \text{ cm}^2$$



$$V = 7.2 \text{ cm}^3$$

$$SA = 24 \text{ cm}^2$$

Optimization: least amount of
surface area
most volume

Prism with S.A. of 384 in^2

$$V = S^3$$

$$V = (8)^3$$

$$V = 512 \text{ in}^3$$

$$\text{S.A.} = 6(S \times S) \quad \text{L} \times \text{W}$$

$$\underline{384} = \underline{6S^2}$$

$$\begin{array}{r} 6 \\ 6 \end{array} \quad \begin{array}{r} 6 \\ 6 \end{array}$$
$$S^2 = 64 \text{ in}$$

$$S = 8 \text{ in}$$

$$V = 1331 \text{ m}^3$$

$$V = S^3$$

$$1331 = S$$

$$\sqrt[3]{1331} = S$$

$$S = 11 \text{ m}$$

$$S.A = 6(S^2)$$

$$= 6(11)^2$$

$$= 6(121)$$

$$= 726 \text{ m}^2$$

p. 110 1, 4, 7, 10, 13