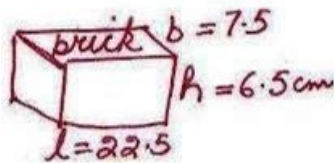
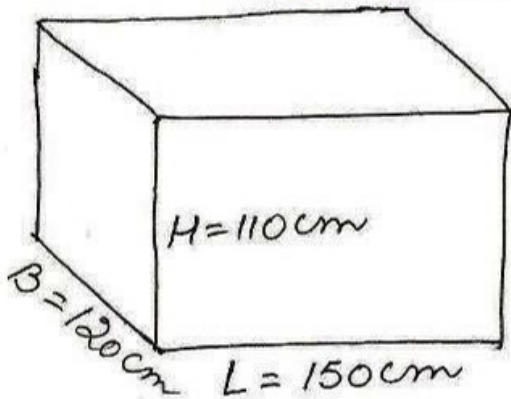


③



ex 13.5

$$\begin{aligned} \text{Volume of cistern} &= LBH \\ &= 150 \times 120 \times 110 \\ &= 1980000 \text{ cm}^3 \end{aligned}$$

$$\begin{aligned} \text{vol of 1 brick} &= lbh \\ &= 22.5 \times 7.5 \times 6.5 \\ &= 1096.875 \text{ cm}^3 \end{aligned}$$

$$\begin{aligned} \text{volume of water in} \\ \text{cistern} &= 129600 \text{ cm}^3 \end{aligned}$$

$$\begin{aligned} \text{volume of water that} \\ \text{can be added to cistern} \\ &= 1980000 - 129600 \\ &= 1850400 \text{ cm}^3 \end{aligned}$$

$$\begin{aligned} \text{volume of water absorbed} \\ \text{by one brick} &= \frac{1}{17} \times 1096.875 \text{ cm}^3 \end{aligned}$$

$$\begin{aligned} \text{volume of water which} \\ \text{increases with each brick} \\ &= 1096.875 - \frac{1}{17} \times 1096.875 \\ &= \frac{16}{17} \times 1096.875 \text{ cm}^3 \end{aligned}$$

$$\begin{aligned} \text{no. of bricks} \\ &= \frac{\text{remain. vol}}{\text{vol. of water which} \\ &\quad \text{increases with each} \\ &\quad \text{brick}} \end{aligned}$$

$$\begin{aligned} &= \frac{1850400}{\frac{16}{17} \times 1096.875} \\ &= \frac{1850400 \times 17}{16 \times 1096.875} \\ &= \frac{31456800}{17550} \\ &= 1792.41 \end{aligned}$$

$$\begin{aligned} \therefore \text{no of bricks} \\ &= 1792 \end{aligned}$$