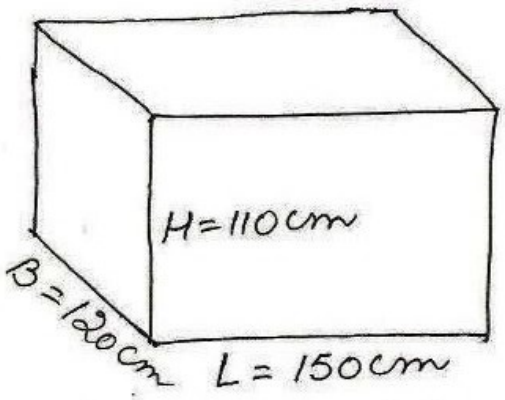
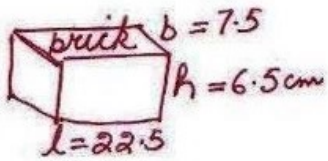
ex 13.5

③





Volume of cistern = LBH

$= 150 \times 120 \times 110$

$= 1980000\ cm^3$

vol of 1 brick = lbh

$= 22.5 \times 7.5 \times 6.5$

$= 1096.875\ cm^3$

volume of water in cistern $= 129600\ cm^3$

volume of water that can be added to cistern

$= 1980000 - 129600$

$= 1850400\ cm^3$

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

volume of water which increases with each brick

$= 1096.875 - \frac{1}{17} \times 1096.875$

$= \frac{16}{17} \times 1096.875\ cm^3$

no. of bricks

$= \frac{\text{remain. vol}}{\text{vol. of water which increases with each brick}}$

$= \frac{1850400}{\frac{16}{17} \times 1096.875}$

$= \frac{1850400 \times 17}{16 \times 1096.875}$

$= \frac{31456800}{17550}$

$= 1792.41$

∴ no of bricks $= 1792$