

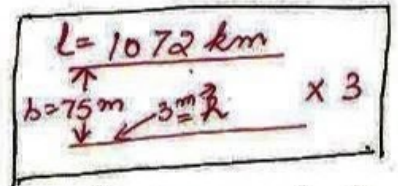
ex 13.5

④ volume of rainfall in valley = area of valley \times rainfall
 $= 97280 \times \frac{10}{100000} \text{ km}^3$ [$\because 1 \text{ cm} = \frac{1}{10^5} \text{ km}$]
 $= 9.728 \text{ km}^3$

vol of rainfall in one fortnight (15 days)
 $= 9.728 \times 15$
 $= 145.92 \text{ km}^3$

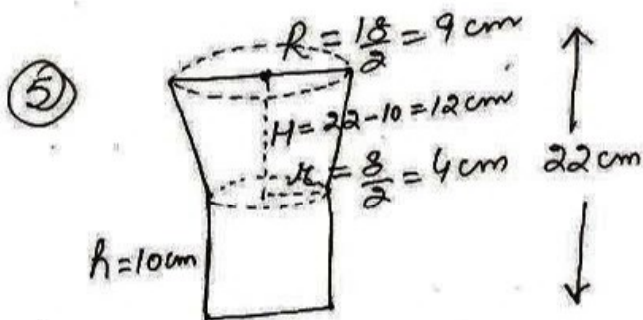
volume of 3 rivers = $3lbh$

$= 3 \times 1072 \times \frac{75}{1000} \times \frac{3}{1000}$ [$\because 1 \text{ m} = \frac{1}{10^3} \text{ km}$]
 $= 0.7236 \text{ km}^3$



volume (total) of 3 rivers and rainfall
 $= 145.92 + 0.7236$
 $= 146.6436 \text{ km}^3$

which is approx. equal to volume of rainfall.



$l = \sqrt{H^2 + (R-r)^2}$
 $= \sqrt{12^2 + (9-4)^2}$
 $= \sqrt{144 + 25}$
 $= \sqrt{169}$
 $= 13 \text{ cm}$

area of tin sheet required = $\pi l(R+r) + 2\pi rh$
 $= \pi [13(9+4) + 2 \times 4 \times 10]$
 $= \pi (169 + 80)$
 $= 249\pi$
 $= 249 \times \frac{22}{7}$
 $= 782 \frac{4}{7} \text{ cm}^2$