

1 B Ramdin \rightarrow 30 days \rightarrow A whole field

work done by Ramdin in one day = $\frac{1}{30}^{\text{th}}$ of the work

So, work done by the 25th day would be $\rightarrow \frac{1}{30} \times 25 = \frac{5}{6}^{\text{th}}$ of the work

Hence, he would have reaped $\frac{5}{6}^{\text{th}}$ of the field in 25 days.

2 Farmer \rightarrow 10 days Farmer's wife \rightarrow 8 days

Farmer in one day $\rightarrow \frac{1}{10}^{\text{th}}$ of work, Farmer's wife in one day $\frac{1}{8}^{\text{th}}$ of the work

so, together in one day, they would do $\frac{1}{10} + \frac{1}{8} = \frac{9}{40}^{\text{th}}$ of the work

so, they can reap the field together in $\frac{40}{9} = 4\frac{4}{9}$ days

4 A+B \rightarrow 2 days, A alone \rightarrow 3 days

so A+B in one day = $\frac{1}{2}^{\text{th}}$ of the work

A in one day = $\frac{1}{3}^{\text{th}}$ of the work

so, B in one day = $\frac{1}{2} - \frac{1}{3} = \frac{1}{6}$ of the work

Hence, B would take 6 days to paint the room himself.

5 A $\rightarrow \frac{1}{5}^{\text{th}}$ of work in 2 days B $\rightarrow \frac{2}{3} \times \frac{2}{8}$ in 8 days

A \rightarrow in one day = $\frac{1}{5} \times \frac{1}{2} = \frac{1}{10}^{\text{th}}$ of the work

B \rightarrow in one day = $\frac{2}{3} \times \frac{1}{4} = \frac{1}{6}^{\text{th}}$ of the work

so A+B in one day = $\frac{1}{10} + \frac{1}{6} = \frac{11}{60}^{\text{th}}$ of the work

Hence they will complete the work in $\frac{60}{11} = 5\frac{5}{11}$ days

6 one tap (1) \rightarrow 20 minutes second tap (2) \rightarrow 12 minutes

work done in 1 minute = $\frac{1}{20}$ work done in 1 minute = $\frac{1}{12}$

work done together = $\frac{1}{20} + \frac{1}{12} = \frac{8}{60}$

work completed in $\frac{60}{8} = 7\frac{4}{8}$ minutes

A \rightarrow 6 days B \rightarrow 8 days , they worked together for 2 days

Work done by A in one day = $\frac{1}{6}$, work done by B in one day = $\frac{1}{8}$

Work done together in one day = $\frac{1}{6} + \frac{1}{8} = \frac{7}{24}$, in 2 days = $\frac{7}{12}$

Total work = 1 Remaining work = $1 - \frac{7}{12} = \frac{5}{12}$

ie, days taken by A = $\frac{5}{12} \times 6 = \frac{5}{2}$ days

A \rightarrow 40 days left after 8 days B \rightarrow rest of the work in 16 days

So work by A in 1 day = $\frac{1}{40}$, work in 8 days = $\frac{8}{40} = \frac{1}{5}$

amount of work remaining = $1 - \frac{1}{5} = \frac{4}{5}$,

\Rightarrow 16 days taken for $\frac{4}{5}$ of work

So days taken = 8 days + 16 days = 24 days
If they work together they will take 48 days

A \rightarrow 10 days B \rightarrow 15 days , A completed remaining work in 5 days

A work in 1 day = $\frac{1}{10}$, B work in 1 day = $\frac{1}{15}$

A's work in 5 days = $\frac{1}{10} \times 5 = \frac{1}{2}$, A and B total work in one day = $\frac{1}{10} + \frac{1}{15} = \frac{5}{30} = \frac{1}{6}$ = 6 days

work together = $1 - \frac{1}{2} = \frac{1}{2}$ day = $\frac{1}{2} \times 6 = 3$ days

3 women 15 girls \rightarrow 17 days

[1 girl will take 85 days]

\Rightarrow 3 women = 5 girls , 1 woman = $\frac{5}{3}$ girls

7 women 11 girls = $\frac{5}{3} \times 7 + 11$ girls

= $\frac{35}{3} + 11 = \frac{68}{3}$ girls

Time = $\frac{68}{3} \times 85 = 7926 \frac{2}{3}$ days $\frac{85 \times 3}{28} = 29 \frac{3}{4}$ days