Time and Work Ex 11.1 Q13

Answer :

It is given that A can finish the work in 40 days and B can finish the same work in 45 days.

$\therefore$ Work done by A in 1 day $= \frac{1}{40}$

Work done by B in 1 day $= \frac{1}{45}$

$\therefore$ Work done by (A + B) in 1 day $= \frac{1}{40} + \frac{1}{45}$

$= \frac{9+8}{360} = \frac{17}{360}$

$\therefore$ Work done by (A + B) in 10 days $= 10 \times \frac{17}{360} = \frac{17}{36}$

Remaining work $= 1 - \frac{17}{36} = \frac{19}{36}$

It is given that the remaining work is done by B.

Complete work is done by B in 45 days.

$\therefore$ $\frac{19}{36}$ of the work will be done by B in $\left(45 \times \frac{19}{36}\right)$ days or $23\frac{3}{4}$ days.

Thus, the remaining work is done by B in $23\frac{3}{4}$ days.

Time and Work Ex 11.1 Q14

Answer :

Aasheesh can paint a doll in 20 minutes, and Chinki can do the same in 25 minutes.

$\therefore$ Work done by Aasheesh in 1 minute $= \frac{1}{20}$

$\therefore$ Work done by Chinki in 1 minute $= \frac{1}{25}$

$\therefore$ Work done by them together $= \frac{1}{20} + \frac{1}{25}$

$= \frac{5+4}{100} = \frac{9}{100}$

$\therefore$ Work done by them in 5 minutes $= 5 \times \frac{9}{100} = \frac{9}{20}$

Remaining work $= 1 - \frac{9}{20} = \frac{11}{20}$

It is given that the remaining work is done by Aasheesh.

The work done by Aasheesh in 20 minutes.

$\therefore$ $\frac{11}{20}$ th work will be done by Aasheesh in $\left(20 \times \frac{11}{20}\right)$ minutes or 11 minutes.

Thus, the remaining work is done by Aasheesh in 11 minutes.

Time and Work Ex 11.1 Q15

Answer :

A can do a work in 6 days, and B can do the same work in 4 days.

$\therefore$ Work done by A in 2 days $= \frac{2}{6} = \frac{1}{3}$

Remaining work $= 1 - \frac{1}{3} = \frac{2}{3}$

$\therefore$ Work done by (A + B) in 1 day $= \left(\frac{1}{6} + \frac{1}{4}\right)$

$= \frac{2+3}{12} = \frac{5}{12}$

$\because$ $\frac{5}{12}$ th work is done by A and B in 1 day.

$\therefore$ $\frac{2}{3}$ rd work will be done by A and B in $\left(\frac{12}{5} \times \frac{2}{3}\right)$ days or $\frac{8}{5}$ days.

$\therefore$ Total time taken $= \left(\frac{8}{5} + 2\right)$ days $= \frac{18}{5}$ days $= 3\frac{3}{5}$ days

Time and Work Ex 11.1 Q16

Answer :

It is given that 6 men can complete a job in 7 days.

$\therefore$ Time taken by 1 man to complete the same job $= (6 \times 7) = 42$ days

$\therefore$ Time taken by 21 men to complete the same job $= \frac{42}{21} = 2$ days

********** END **********