

Solutions by Dev Anoop

⑩

Person/s	A	B
Time to finish work (in days)	15	
work done in 1 day	$\frac{1}{15}$	$\frac{1}{15} + \frac{50}{100} \times \frac{1}{15}$
		$= \frac{1}{15} + \frac{1}{30}$
		$= \frac{2+1}{30}$
		$= \frac{3}{30}$

\therefore Time taken to finish work $= \frac{1}{\frac{3}{30}} = 10$ days

⑪ Person/s

	A	B
Time to finish work (in days)	$\frac{15}{2}$	x
work done in unit time	$\frac{2}{15}$	$\frac{1}{x}$

$$\frac{1}{x} - \frac{20}{100} \times \frac{1}{x} = \frac{2}{15}$$

$$\Rightarrow \frac{5-1}{5x} = \frac{2}{15}$$

$$\Rightarrow \frac{4}{5x} = \frac{2}{15}$$

$$\Rightarrow x = \frac{4}{5} \times \frac{15}{2}$$

$$\Rightarrow x = 6$$

Time taken to finish work
= 6 days