

Time and Work - Part I LCM TECH:

1. If A can do a piece of work in 10 days and B can complete the same work in 15 days, in how many days will both of them together complete the work?

(a) 5 days (b) ☒ 6 days (c) 8 days (d) 10 days (e) None

$$\begin{array}{l} \checkmark A = 10 \text{ days} \\ \checkmark B = 15 \text{ days} \end{array} \rightarrow \begin{array}{l} 3 \text{ eff} \\ 30 \text{ (work)} \\ 2 \end{array}$$

$$\frac{30}{3+2} = \frac{30}{5} = \underline{6 \text{ days}}$$

de w ← mountain
↓ ↓
days × eff = work

LCM Tech:

$$A = 10 \text{ days}$$

$$B = 15 \text{ days}$$

days	eff	work
10	3	30
15	2	30

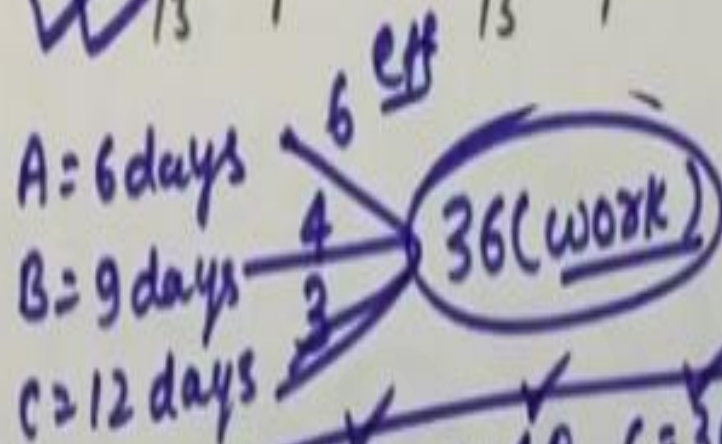
$$\begin{array}{l} A \text{ eff} = 3 \\ B \text{ eff} = 2 \end{array} \rightarrow \begin{array}{l} 30 \checkmark \\ 20 \checkmark \end{array} \Rightarrow 50$$

$$\checkmark \frac{30}{5} = \underline{6 \text{ days}}$$

$$\frac{\text{days}}{10} \times \frac{\text{eff}}{3} = \frac{\text{work}}{30}$$

2. A can do a work in 6 days, B in 9 days (in 12 days). In how many days can A, B, & C together complete the work?

- (A) $3\frac{11}{14}$ days (B) $2\frac{10}{13}$ days (C) $4\frac{10}{13}$ days (D) None



$$A = 6a, B = 4a, C = 3a \Rightarrow 13a$$

$$13 \overline{) 36} \begin{array}{r} 2 \\ 26 \\ \hline 10 \end{array}$$

$$\frac{36}{13} = 2\frac{10}{13} \text{ days } \checkmark$$