



IBPS PRELIMS - 30 DAYS REVISION PLAN



CLASS 13 - TIME & WORK

Q1. 24 men complete half of the work in 10 days. Efficiency of the women is double of men. In how many days 8 men and 12 women complete the work?

A. 10 days

B. 12 days

✓ C. 15 days

D. 18 days

E. None of these

$$\text{Work} = 24 \times 10$$

$$\text{Work} = 480$$

$$W:M$$

$$2:1$$

$$8M + 12W = 8(1) + 12(2)$$

$$= 8 + 24$$

$$= 32$$

$$\text{Days} = \frac{\text{Work}}{\text{Efficiency}}$$

$$= \frac{480}{32} = 15$$

$$: 15 \text{ days}$$

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Q2. A completes 75% of a work in 12 days and B completes 125% of the work in 10 days. In how many days A and B together can complete 75% of the work?

- ✓ A. 4 days
- B. 6 days
- C. 6 days
- D. 10 days
- E. None of these

$$A \rightarrow 75\% = 12 \text{ days}$$

$$A = \frac{12}{75} \times 100$$

$$A = 16 \text{ days}$$

$$B \rightarrow 125\% = 10 \text{ days}$$

$$B = \frac{10}{125} \times 100$$

$$B = 8 \text{ days}$$

$$\begin{array}{c} A - 16 \\ B - 8 \end{array} \left\{ \begin{array}{c} \text{Work} \\ 16 \end{array} \right. \left\{ \begin{array}{c} \text{Eff} \\ 1 \\ 2 \\ \hline 3 \end{array} \right.$$

$$A+B = \frac{16}{3}$$

$$75\% = \frac{12}{16} \times \frac{75}{100} = 4 \text{ days}$$



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Q3. A, B and C work together to complete a work worth Rs.28908. The ratio of time taken to complete the work by A, B and C is 6:9:11. Find the wage for C.

A. Rs.7028

B. Rs.9128

C. Rs.7218

D. Cannot be determined

✓ E. Rs.7128

$$\text{Efficiency} = \frac{1}{6} : \frac{1}{9} : \frac{1}{11}$$

$$= 33 : 22 : 18$$

$$\text{Wage of C} = \frac{18}{33+22+18} \times 28908$$

$$= \frac{18}{73} \times 28908$$

$$= 7128$$

$$\begin{array}{r} 3 \overline{) 6,9,11} \\ 2,3,11 \end{array}$$

$$\begin{array}{r} 6 \times 33 \\ \hline 198 \end{array}$$

$$\begin{array}{r} 55 \\ 18 \\ \hline 73 \end{array}$$

$$\begin{array}{r} 396 \\ 73 \overline{) 28908} \\ \underline{219} \\ 6700 \\ \underline{657} \\ 130 \\ \underline{138} \\ 20 \end{array}$$

$$\begin{array}{r} 74 \\ 396 \times 18 \\ \hline 3168 \\ 396 \\ \hline 7128 \end{array}$$

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Q4. A can do a piece of work in 25 days, B can do it in 20 days. They started the work together but A left 5 days before the completion of the work. The work has finished in?

- ✓ A. $13 \frac{1}{3}$ days
- B. $15 \frac{3}{7}$ days
- C. $11 \frac{4}{9}$ days
- D. $9 \frac{3}{8}$ days
- E. None of these

Handwritten solution for Q4:

Let the total work be 100 units.

A's work rate = $\frac{100}{25} = 4$ units/day

B's work rate = $\frac{100}{20} = 5$ units/day

Let the work be completed in x days.

A worked for $x - 5$ days.

Work done by A = $4(x - 5)$

Work done by B = $5x$

Total work done = $4(x - 5) + 5x = 100$

$4x - 20 + 5x = 100$

$9x = 120$

$x = \frac{120}{9} = 13 \frac{1}{3}$ days

Answer: A. $13 \frac{1}{3}$ days

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Q5. 15 men can do a piece of work in 60 days working 8 hours in a day.
 How many men required completing half of the work in 30 days working 12 hours in a day?

✓ A. 10

B. 12

C. 14

D. 8

E. None of these

$$\frac{M_1 D_1 H_1}{W_1} = \frac{M_2 D_2 H_2}{W_2}$$

$$\frac{15 \times 60 \times 8}{1} = \frac{M_2 \times 30 \times 12}{\frac{1}{2}}$$

$$5 \times 2 \times 2 = M_2 \times 2$$

$$\boxed{10 = M_2}$$



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Q6. 12 men can complete a work in 15 days and 15 women can complete the same work in 24 days. Then find 15 men and 20 women can complete the work in?

A. 8 (2/3) days

B. 9 (5/6) days

C. 10 (3/4) days

☒ D. 7 (1/5) days

E. None of these

$$12M \times 15 = 15W \times 24$$

$$M = 2W$$

$$\frac{M}{W} = \frac{2}{1}$$

$$\begin{aligned} \text{Work} &= 15W \times 24 \\ &= 360 \end{aligned}$$

$$\text{Days} = \frac{360}{15(2) + 20(1)}$$

$$= \frac{360}{50}$$

$$= 7 \frac{1}{5} \text{ days}$$

$$\begin{array}{r} 24 \times 15 \\ 240 \\ 120 \\ \hline 360 \end{array}$$

$$\begin{array}{r} 5 \overline{) 36} \\ 35 \\ \hline 1 \end{array}$$

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Q7. To complete a work Jeba takes 50% more time than Josh. If together they take 21 days to complete the work, how much time shall Josh take to do it alone?

A. 45 days

B. 40 days

C. 30 days

☒ D. 35 days

E. 25 days

Jeba : Josh

~~150%~~ : ~~100%~~

Time $\rightarrow 3 : 2 = 5$

Effi $\rightarrow 2 : 3$

Work = $2 \times 5 = 10$

Josh Days = $\frac{35}{10} = 3.5$ days

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Q8. A and B together can complete the work in 30 days. If B alone completes 20% of the work in 16 days. In how many days A alone completes 75% of the work?

- A. 40 days
- ✓ B. 36 days
- C. 32 days
- D. 28 days
- E. None of these

$$A+B = 30$$

$$B = 80$$

$$A+B = 8$$

$$A = 8-3$$

$$A = 5$$

$$A \cdot \text{Days} = \frac{40}{5} = 8 \text{ days}$$

$$75\% \text{ of } W = \frac{12}{48} \times \frac{3}{100} = 36 \text{ days}$$

$$B = 16 \times \frac{5}{20} = 80 \text{ days}$$

$$10 \overline{) 30,80} \\ \underline{3,0}$$

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Q9. A, B and C together can complete the work in 24 days. Efficiency of A is thrice of B and efficiency of C is 50% of A and B together. In how many days B alone completes the work?

- A. 136 days
- B. 140 days
- ☒ C. 144 days
- D. 148 days
- E. None of these

$$A : B$$

$$3 : 1$$

$$C = 50\% \text{ of } (A+B)$$

$$= \frac{50}{100} \times \frac{3+1}{2}$$

$$\boxed{C=2}$$

$$\text{Work} = 24 \times 6$$

$$= 144$$

$$B\text{-days} = \frac{144}{1} = 144 \text{ days}$$

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Q10. A, B and C can complete the work in 16 days, 20 days and 24 days respectively. The total wage is Rs.1850. If they work together to complete the work, what is A's wage?

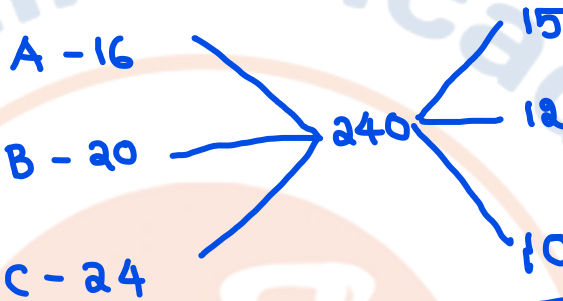
A. Rs.500

✓ B. Rs.750

C. Rs.650

D. Rs.850

E. None of these



$$\begin{array}{r} 4 \overline{) 16, 20, 24} \\ \underline{4, 5, 6} \\ 2, 5, 3 \end{array}$$

Handwritten calculation for A's wage:

$$\text{A's wage} = \frac{15}{37} \times 1850 = 750$$

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Q11. 24 men were appointed to complete the work in 40 days. But after 20 days, it was found that only one third of the work was completed. In how many extra men needed to complete the work in time?

A. 20

B. 22

☒ C. 24

D. 28

E. None of these

$$\frac{24 \times 40}{\frac{1}{3}} = \frac{(24+x) \times 20}{\frac{2}{3}}$$

$$48 = 24 + x$$

$$\boxed{24 = x}$$

$$\begin{array}{r} 72 \\ 24 \\ \hline 48 \end{array}$$

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Q12. The ratio of the efficiency of A and B is 4:5. A and B work on alternate days. If the work completes after 12 days and they get the total amount is Rs.4500, then find the amount received by B.

A. Rs.2000

☒ B. Rs.2500

C. Rs.2800

D. Rs.3000

E. None of these

$$A:B = 4:5$$

$$B = \frac{5}{4} \times \frac{500}{5} = 2500$$

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Q13. Vino and Jino completes a work alone in 18 days and 24 days respectively. If Jino started work alone and after 3 days Vino also joined then in how many days the whole work will be completed.

A. 15 days

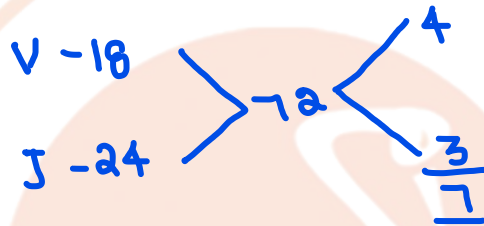
☒ B. 12 days

C. 10 days

D. 8 days

E. 18 days

V : J



$$3 \times 3 = 9$$

$$\text{Remain} = 72 - 9 = 63$$

$$D = \frac{63}{7} = 9$$

$$\text{Total} = 3 + 9 = 12 \text{ days}$$

$$6 \overline{) 18, 24} \\ \underline{3 4} \\ 12 \times 6 = 72$$