

TIME AND WORK

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MODULE OBJECTIVE:

In this lesson we will discuss one of the most easiest and important topic i.e. WORK.

DEFINITION :

Technically speaking, Work is the quantity of energy transferred from one system to another but for question based on this topic-

Work is defined as the amount of job assigned or the amount of job actually done.

Problem on work are based on the application of concept of ratio of time and speed.

Work is always considered as a whole or one. There exists an analogy between the timespeed-distance problems and work.

Work based problem are more or less related to time speed and distance.

Above mentioned definition of work throws light on three important points.

- Work = 1 (as it is always measured as a whole) = Distance
- Rate at which work is done = speed
- Number of days required to do the work = Time

Formulas:

1. Work from Days:

1

If A can do a piece of work in n days, then A's 1 day's work =

$\frac{1}{n}$ **2. Days from Work:**

1

If A's 1 day's work = $\frac{1}{n}$, then A can finish the work in n days.

n

3. Ratio:

If A is thrice as good a workman as B, then:

Ratio of work done by A and B = 3 : 1.

Ratio of times taken by A and B to finish a work = 1 : 3.

4. If A is 'x' times as good a workman as B, then he will take $\frac{1}{x}$ th of the time by B to do the same work.

5. A and B can do a piece of work in 'a' days and 'b' days respectively, then working together, they will take $\frac{xy}{x+y}$ days to finish the work and in one day, they will finish

$\frac{x+y}{xy}$ th part of work.

SOLVED EXAMPLES

1) **Problem:** If 9 men working 6 hours a day can do a work in 88 days. Then 6 men working 8 hours a day can do it in how many days?

Solution: From the above formula i.e $(m_1 * t_1 / w_1) = (m_2 * t_2 / w_2)$ so $(9 * 6 * 88 / 1) = (6 * 8 * d / 1)$ on solving, $d = 99$ days.

2) **Problem:** If 34 men completed $\frac{2}{5}$ th of a work in 8 days working 9 hours a day. How many more man should be engaged to finish the rest of the work in 6 days working 9 hours a day?

Solution: From the above formula i.e $(m_1 * t_1 / w_1) = (m_2 * t_2 / w_2)$

so, $(34 * 8 * 9 / (\frac{2}{5})) = (x * 6 * 9 / (\frac{3}{5}))$

so, $x = 136$ men

number of men to be added to finish the work = $136 - 34 = 102$ men

3) **Problem:** If 5 women or 8 girls can do a work in 84 days. In how many days can 10 women and 5 girls can do the same work?

Solution: Given that 5 women is equal to 8 girls to complete a work. So, 10 women = 16 girls. Therefore 10 women + 5 girls = 16 girls + 5 girls = 21 girls.

8 girls can do a work in 84 days then 21 girls can do a work in $(8 * 84 / 21) = 32$ days.

Therefore 10 women and 5 girls can work in 32 days

4) **Problem:** Worker A takes 8 hours to do a job. Worker B takes 10 hours to do the same job. How long it take both A & B, working together but independently, to do the same job?

Solution: A's one hour work = $\frac{1}{8}$. B's one hour work = $\frac{1}{10}$. (A+B)'s one hour work = $\frac{1}{8} + \frac{1}{10} = \frac{9}{40}$. Both A & B can finish the work in $\frac{40}{9}$ days

5) **Problem:** A can finish a work in 18 days and B can do the same work in half the time taken by A. Then, working together, what part of the same work they can finish in a day?

Solution: Given that B alone can complete the same work in days = half the time taken by A = 9 days A's one day work = $1/18$

B's one day work = $1/9$

(A+B)'s one day work = $1/18 + 1/9 = 1/6$

6) **Problem:** A is twice as good a workman as B and together they finish a piece of work in 18 days. In how many days will A alone finish the work.

Solution: if A takes x days to do a work then B takes 2x days to do the same work

$$=> 1/x + 1/2x = 1/18 =$$

$$> 3/2x = 1/18$$

$$=> x = 27 \text{ days.}$$

Hence, A alone can finish the work in 27 days.

7) **Problem:** A can do a certain work in 12 days. B is 60% more efficient than A. How many days does B alone take to do the same job?

Solution: Ratio of time taken by A & B = 160:100 = 8:5

Suppose B alone takes x days to do the job.

Then, 8:5::12:x =

$$> 8x = 5 \cdot 12 => x =$$

$$= 15/2 \text{ days.}$$

8) **Problem:** A can do a piece of work in 7 days of 9 hours each and B alone can do it in 6 days of 7 hours each. How long will they take to do it working together 8 $2/5$ hours a day?

Solution: A can complete the work in $(7 \cdot 9) = 63$ days

B can complete the work in $(6 \cdot 7) = 42$ days

$$=> \text{A's one hour's work} = 1/63 \text{ and}$$

$$\text{B's one hour work} = 1/42$$

$$\text{(A+B)'s one hour work} = 1/63 + 1/42 = 5/126$$

Therefore, Both can finish the work in $126/5$ hours.

$$\text{Number of days of } 8 \frac{2}{5} \text{ hours each} = (126 \cdot 5 / (5 \cdot 42)) = 3 \text{ days}$$

9) **Problem:** A takes twice as much time as B or thrice as much time to finish a piece of work. Working together they can finish the work in 2 days. B can do the work alone in ?

Solution: Suppose A, B and C take x, x/2 and x/3 hours respectively finish the work then $1/x + 2/x + 3/x = 1/2$

$$=> 6/x = 1/2$$

$$=> x = 12$$

So, B takes 6 hours to finish the work.

10) Problem: X can do $\frac{1}{4}$ of a work in 10 days, Y can do 40% of work in 40 days and Z can do $\frac{1}{3}$ of work in 13 days. Who will complete the work first?

Solution: Whole work will be done by X in $10 \times 4 = 40$ days.

Whole work will be done by Y in $(40 \times 100 / 40) = 100$ days.

Whole work will be done by Z in $(13 \times 3) = 39$ days

Therefore, Z will complete the work first.

11) Problem: If A can complete a work in 10 days and B is 100 faster than A. How much time B will take to complete the work?

Solution:

A takes to perform 1 work = 10 days.

= B will perform the same work = $\frac{1}{2}$ time than A.

= B will take to perform the same work = $10 \text{ days} \times \frac{1}{2} = 5 \text{ days}$

12) If 10 men are working on a project and can complete the work in 10 days. 5 of them are placed at some other work, then how much time will take remaining to perform the job?

Solution:

Men at work earlier = 10

Men at work later = 5

Ration of workers = a : b = 2 : 1

10 men can perform the complete task = 10 days

5 men will perform the same task in = b : a time = 1 : 2 => 20 days.

13) Problem : A group of men completes a work in 10 days, but five of them are absent and so the rest do the work in 12 days. Find the original number of Men.

Solution:

More men, less days.

<u>MEN</u>		<u>DAYS</u>
X	↓	10
X - 5	↓	12

$$\frac{x}{x-5} = \frac{12}{10} = 30$$

= Total men at work = 30

14. A can do a certain work in 12 days. B is 60% more efficient than A. How many days does B alone take to do the same job?

Solution: Ratio of time taken by A & B = 160:100 = 8:5

Suppose B alone takes x days to do the job.

Then, 8:5::12:x =

$> 8x = 5 \cdot 12$

$= > x = 15/2$ days.

15) A can do a piece of work in 7 days of 9 hours each and B alone can do it in 6 days of 7 hours each. How long will they take to do it working together 8 $\frac{2}{5}$ hours a day?

Solution: A can complete the work in $(7 \cdot 9) = 63$ days

B can complete the work in $(6 \cdot 7) = 42$ days

$= > A$'s one hour's work = $1/63$ and

B 's one hour work = $1/42$

$(A+B)$'s one hour work = $1/63 + 1/42 = 5/126$

Therefore, Both can finish the work in $126/5$ hours.

Number of days of $8 \frac{2}{5}$ hours each = $(126 \cdot 5 / (5 \cdot 42)) = 3$ days

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2. Answer: Option C

Explanation:

$$(A + B + C)'s\ 1\ day's\ work = \frac{1}{4}$$

$$A's\ 1\ day's\ work = \frac{1}{16}$$

$$B's\ 1\ day's\ work = \frac{1}{12}$$

$$\therefore C's\ 1\ day's\ work = \left(\frac{1}{4} - \frac{1}{16} - \frac{1}{12} \right) = \frac{1}{48}$$

$$\text{So, C alone can do the work in } \frac{48}{1} = 48\ \text{days.}$$

3. A, B and C can do a piece of work in 20, 30 and 60 days respectively. In how many days can A do the work if he is assisted by B and C on every third day?

A.12 days B.15 days

C.16 days D.18 days

Answer: Option B

Explanation:

$$A's\ 2\ day's\ work = \left(\frac{1}{20} \times 2 \right) = \frac{1}{10}$$

$$(A + B + C)'s\ 1\ day's\ work = \left(\frac{1}{10} + \frac{1}{30} + \frac{1}{60} \right) = \frac{1}{6}$$

$$\text{Work done in 3 days} = \frac{1}{10} + \frac{1}{10} + \frac{1}{5} = \frac{1}{2}$$

Now, work is done in 3 days. 5

\(\therefore\) Whole work will be done in $(3 \times 5) = 15$ days.

4. A is thrice as good as workman as B and therefore is able to finish a job in 60 days less than B. Working together, they can do it in:

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$$\text{C's 1 day's work} = \frac{1}{3} + \frac{1}{6} + \frac{1}{8} = \frac{8}{24} + \frac{4}{24} + \frac{3}{24} = \frac{15}{24} = \frac{5}{8}$$

$$\text{A's wages : B's wages : C's wages} = \frac{1}{6} : \frac{1}{8} : \frac{1}{24} = 4 : 3 : 1$$

$$\therefore \text{C's share (for 3 days)} = \left(\frac{\text{Rs. } 3200 \times \frac{1}{8}}{4+3+1} \right) \times 3 = \text{Rs. } 400$$

6. If 6 men and 8 boys can do a piece of work in 10 days while 26 men and 48 boys can do the same in 2 days, the time taken by 15 men and 20 boys in doing the same type of work will be:

A.4 days

B.5 days

C.6 days

D.7 days

6. Answer: Option A

Explanation:

Let 1 man's 1 day's work = x and 1 boy's 1 day's work = y .

Then, $6x + 8y = \frac{1}{10}$ and $26x + 48y = \frac{1}{2}$

Solving these two equations, we get : $x = \frac{1}{100}$ and $y = \frac{1}{200}$

(15 men + 20 boy)'s 1 day's work $\left(\frac{15}{100} + \frac{20}{200} \right) = \frac{20}{100} = \frac{1}{5}$

\therefore 15 men and 20 boys can do the work in 5 days.

7. A can do a piece of work in 4 hours; B and C together can do it in 3 hours, while A and C together can do it in 2 hours. How long will B alone take to do it?

A.8 hours

B.10 hours

C.12 hours

D.24 hours

7. Answer: Option C

Explanation:

$$\text{A's 1 hour's work} = \frac{1}{4}$$

$$\text{(B + C)'s 1 hour's work} = \frac{1}{3}$$

$$\text{(A + C)'s 1 hour's work} = \frac{1}{2}$$

$$\text{(A + B + C)'s 1 hour's work} = \left(\frac{1}{4} + \frac{1}{3} + \frac{1}{12} \right) = \frac{7}{12}$$

$$\text{B's 1 hour's work} = \frac{1}{12} - \frac{1}{12} = 0$$

∴ B alone will take 12 hours to do the work.

8. A can do a certain work in the same time in which B and C together can do it. If A and B together could do it in 10 days and C alone in 50 days, then B alone could do it in:

- A.15 days B.20 days
C.25 days D.30 days

8. Answer: Option C

Explanation:

$$\text{(A + B)'s 1 day's work} = \frac{1}{10}$$

$$\text{C's 1 day's work} = \frac{1}{50}$$

$$\text{(A + B + C)'s 1 day's work} = \left(\frac{1}{10} + \frac{1}{50} + \frac{1}{50} \right) = \frac{16}{25} \quad \dots (i)$$

$$\text{A's 1 day's work} = \text{(B + C)'s 1 day's work} \quad \dots (ii)$$

$$\text{From (i) and (ii), we get: } 2 \times \text{(A's 1 day's work)} = \frac{3}{25}$$

3

\Rightarrow A's 1 day's work = $\frac{1}{50}$.

\therefore B's 1 day's work $\left(\frac{1}{10} - \frac{1}{50} \right) = \frac{1}{25}$.

So, B alone could do the work in 25 days

9. A does 80% of a work in 20 days. He then calls in B and they together finish the remaining work in 3 days. How long B alone would take to do the whole work?

A.23 days B.37 days

C.37 $\frac{1}{2}$ D.40 days

9. Answer: Option C

Explanation:

work is done by A in 20 x $\left(\frac{5}{4} \right)$ Whole days.

$\left(\frac{4}{5} \right)$ Now, $\frac{1}{5}$ i.e., work is done by A and B in 3 days.

Whole work will be done by A and B in $(3 \times 5) = 15$ days.

A's 1 day's work = $\frac{1}{25}$, (A + B)'s 1 day's work = $\frac{1}{15}$.

\therefore B's 1 day's work = $\left(\frac{1}{15} - \frac{1}{25} \right) = \frac{1}{75}$.

So, B alone would do the work in $75 = 37\frac{1}{2}$ days.

10. A machine P can print one lakh books in 8 hours, machine Q can print the same number of books in 10 hours while machine R can print them in 12 hours. All the machines are started at 9 A.M. while machine P is closed at 11 A.M. and the remaining two machines complete work. Approximately at what time

will the work (to print one lakh books) be finished ?

- A.11:30 A.M. B.12 noon C.12:30 P.M. D.1:00 P.M.

10. Answer: Option D

Explanation:

$$(P + Q + R)'s \ 1 \ hour's \ work = \left(\frac{1}{8} + \frac{1}{10} + \frac{1}{12} \right) = \frac{37}{120}$$

$$\text{Work done by P, Q and R in 2 hours} = \frac{37}{120} \times 2 = \frac{37}{60}$$

$$\text{Remaining work} = \left(1 - \frac{37}{60} \right) = \frac{23}{60}$$

$$(Q + R)'s \ 1 \ hour's \ work = \left(\frac{1}{10} + \frac{1}{12} \right) = \frac{11}{60}$$

Now, $\frac{11}{60}$ work is done by Q and R in 1 hour.

So, $\frac{23}{60}$ work will be done by Q and R in $\frac{23}{11}$ hours ≈ 2 hours.

So, the work will be finished approximately 2 hours after 11 A.M., i.e., around 1 P.M.

11. A can finish a work in 18 days and B can do the same work in 15 days. B worked for 10 days and left the job. In how many days, A alone can finish the remaining work?

A.5 B.5

C.6 D.8

11. Answer: Option C Explanation:

$$B's \ 10 \ day's \ work = \left(\frac{1}{15} \right) \times 10 = \frac{2}{3}$$

$$\text{Remaining work} = 1 - \frac{15}{3} \times \frac{3}{3} = \frac{2}{3}$$

Now, $\frac{1}{18}$ work is done by A in 1 day.

$$\frac{1}{3} \therefore \text{work is done by A in } 18 \times \frac{1}{3} = 6 \text{ days.}$$

12. 4 men and 6 women can complete a work in 8 days, while 3 men and 7 women can complete it in 10 days. In how many days will 10 women complete it?

- [A.35](#) [B.40](#)
[C.45](#) [D.50](#)

12. Answer: Option B

Explanation:

Let 1 man's 1 day's work = x and 1 woman's 1 day's work = y .

Then, $4x + 6y = \frac{1}{8}$ and $3x + 7y = \frac{1}{10}$.

Solving the two equations, we get: $x = \frac{11}{400}$, $y = \frac{1}{400}$

\therefore 1 woman's 1 day's work = $\frac{1}{400}$.
 \Rightarrow 10 women's 1 day's work $\left(\frac{11}{400} = x \right)$ $10 = \frac{11}{40}$.
40040

Hence, 10 women will complete the work in 40 days.

13. A and B can together finish a work 30 days. They worked together for 20 days and then B left. After another 20 days, A finished the remaining work. In how many days A alone can finish the work?

- [A.40](#) [B.50](#)
[C.54](#) [D.60](#)

13. Answer: Option D

Explanation:

$$(A + B)'s\ 20\ day's\ work = \left(\frac{12}{x} \right) 20 = .$$

$$Remaining\ work = 1 - \frac{\left(\frac{2}{3} \right) 1}{3} = .$$

Now, work is done by A in 20 days.

Therefore, the whole work will be done by A in $(20 \times 3) = 60$ days.

14. P can complete a work in 12 days working 8 hours a day. Q can complete the same work in 8 days working 10 hours a day. If both P and Q work together, working 8 hours a day, in how many days can they complete the work?

- A.5 B.5
- C.6 D.6

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14. Answer: Option A

Explanation:

P can complete the work in (12×8) hrs. = 96 hrs.

Q can complete the work in (8×10) hrs. = 80 hrs.

$$\therefore P's\ 1\ hour's\ work = \frac{1}{96} \quad \text{and} \quad Q's\ 1\ hour's\ work = \frac{1}{80} .$$

$$(P + Q)'s\ 1\ hour's\ work = \left(\frac{1}{96} + \frac{1}{80} \right) = \frac{11}{480}$$

So, both P and Q will finish the work in $\frac{480}{11}$ hrs.

$$\therefore \text{Number of days of 8 hours each} = \frac{480}{11 \times 8} = \frac{60}{11} = 5 \frac{5}{11} \text{ days} = 5 \text{ days.}$$

15. 10 women can complete a work in 7 days and 10 children take 14 days to complete the work. How many days will 5 women and 10 children take to complete the work?

A.3

B.5

C.7

D.Cannot be determined

E.None of these

15. Answer: Option C

Explanation:

$$\text{woman's 1 day's work} = \frac{1}{70}$$

$$\text{child's 1 day's work} = \frac{1}{140}$$

$$(5 \text{ women} + 10 \text{ children})'s \text{ day's work} = \left(\frac{5}{70} + \frac{10}{140} \right) = \frac{10}{140} + \frac{10}{140} = \frac{20}{140} = \frac{1}{7}$$

∴ 5 women and 10 children will complete the work in 7 days.

16. X and Y can do a piece of work in 20 days and 12 days respectively. X started the work alone and then after 4 days Y joined him till the completion of the work. How long did the work last?

A.6 days

B.10 days

C.15 days

D.20 days

16. Answer: Option B

Explanation:

$$\text{Work done by X in 4 days} = \frac{4}{20} = \frac{1}{5}$$

$$\text{Remaining work} = 1 - \frac{1}{5} = \frac{4}{5}$$

$$(X + Y)'s \text{ 1 day's work} = \frac{1}{20} + \frac{1}{12} = \frac{3}{60} + \frac{5}{60} = \frac{8}{60} = \frac{2}{15}$$

Now, $\frac{4}{5}$ work is done by X and Y in 1 day.

$$\text{So, work will be done by X and Y in } \frac{4}{\frac{2}{15}} = 6 \text{ days.}$$

Hence, total time taken = (6 + 4) days = 10 days.

17. A is 30% more efficient than B. How much time will they, working together, take to complete a job which A alone could have done in 23 days?

A. 11 days

B. 13 days

3

C. 20

day

s

D. None of these

17

17. Answer: Option B

Explanation:

Ratio of times taken by A and B = 100 : 130 = 10 : 13.

Suppose B takes x days to do the work.

Then, $10 : 13 :: 23 : x$ $\Rightarrow x = \left(\frac{23}{10} \times 13 \right) = 29.9$

A's 1 day's work = $\frac{1}{23}$;

B's 1 day's work = $\frac{10}{299}$.

(A + B)'s 1 day's work $\left(\frac{1}{23} + \frac{10}{299} \right) = \frac{13}{299} = \frac{1}{23}$.

Therefore, A and B together can complete the work in 13 days.

18. Ravi and Kumar are working on an assignment. Ravi takes 6 hours to type 32 pages on a computer, while Kumar takes 5 hours to type 40 pages. How much time will they take, working together on two different computers to type an assignment of 110 pages?

A. 7 hours 30 minutes

B. 8 hours

C. 8 hours 15 minutes

D. 8 hours 25 minutes

18. Answer: Option C

Explanation:

$$\text{Number of pages typed by Ravi in 1 hour} = \frac{32}{6} = \frac{16}{3}$$

$$\text{Number of pages typed by Kumar in 1 hour} = \frac{40}{5} = 8$$

$$\text{Number of pages typed by both in 1 hour} = \left\{ \frac{16}{3} + 8 \right\} = \frac{40}{3}$$

$$\therefore \text{Time taken by both to type 110 pages} = 110 \times \frac{3}{40} \text{ hours}$$

$$= \frac{1}{4} \text{ hours (or) 8 hours 15 minutes.}$$

19. A, B and C can complete a piece of work in 24, 6 and 12 days respectively.

Working together, they will complete the same work in:

- A. $\frac{1}{24}$ day B. $\frac{7}{24}$ day
 C. $\frac{3}{7}$ days D. $\frac{4}{7}$ days

19. Answer: Option C

Explanation:

Formula: If A can do a piece of work in n days, then A's 1 day's work = $\frac{1}{n}$

$$(\text{A} + \text{B} + \text{C})\text{'s 1 day's work} = \left(\frac{1}{24} + \frac{1}{6} + \frac{1}{12} \right) = \frac{1}{4}$$

Formula: If A's 1 day's work = $\frac{1}{n}$, then A can finish the work in n days.

So, all the three together will complete the job in $\left(\frac{24}{4} \right) = 6$ days.
 20. Sakshi can do a piece of work in 20 days. Tanya is 25% more efficient than Sakshi. The number of days taken by Tanya to do the same piece of work is:

So, B takes $(12/2) = 6$ days to finish the work.

22. A and B can complete a work in 15 days and 10 days respectively. They started doing the work together but after 2 days B had to leave and A alone completed the remaining work. The whole work was completed in :
A.8 days B.10 days
C.12 days D.15 days

22. Answer: Option C

Explanation:

$$(A + B)\text{'s 1 day's work} = \left(\frac{1}{15} + \frac{1}{10}\right) = \frac{1}{6}$$

$$\text{Work done by A and B in 2 days} = \left(\frac{1}{6} \times 2\right) = \frac{1}{3}$$

$$\text{Remaining work} = \left(1 - \frac{1}{3}\right) = \frac{2}{3}$$

Now, $\frac{1}{15}$ work is done by A in 1 day.

$$\frac{2}{3} \therefore \text{work will be done by a in } 15 \times \frac{2}{3} = 10 \text{ days.}$$

Hence, the total time taken = $(10 + 2) = 12$ days.

23. A and B can do a piece of work in 30 days, while B and C can do the same work in 24 days and C and A in 20 days. They all work together for 10 days when B and C leave. How many days more will A take to finish the work?

A.18 days B.24 days
C.30 days D.36 days

23. Answer: Option A

Explanation:

$$2(A + B + C)'s\ 1\ day's\ work = \left(\frac{1}{30} + \frac{1}{24} + \frac{1}{20} \right) = \frac{11}{120}$$

Therefore, (A + B + C)'s 1 day's work = $\frac{11}{120}$

Work done by A, B, C in 10 days = $\frac{11}{120} \times 10 = \frac{11}{12}$

$$\begin{aligned} \text{Remaining work} &= 1 - \frac{11}{12} = \frac{1}{12} \\ \text{A's 1 day's work} &= \frac{1}{48} \end{aligned}$$

Now, $\frac{1}{12}$ work is done by A in $\frac{1}{12} \times 48 = 4$ days.

So, work will be done by A in $48 \times \frac{3}{8} = 18$ days.

24. A works twice as fast as B. If B can complete a work in 12 days independently, the number of days in which A and B can together finish the work in :

- A.4 days B.6 days
C.8 days D.18 days

24. Answer: Option A

Explanation:

Ratio of rates of working of A and B = 2 : 1.

So, ratio of times taken = 1 : 2.

$$\text{B's 1 day's work} = \frac{1}{12}$$

1

∴ A's 1 day's work = ; (2 times of B's work)

6

$$(A + B)\text{'s 1 day's work} = \left(\frac{1}{6} + \frac{1}{12} \right) = \frac{3}{12} + \frac{1}{12} = \frac{4}{12} = \frac{1}{3}$$

So, A and B together can finish the work in 4 days.

25. Twenty women can do a work in sixteen days. Sixteen men can complete the same work in fifteen days. What is the ratio between the capacity of a man and a woman?

A. 3 : 4 B. 4 : 3

C. 5 : 3 D. Data inadequate

25. Answer: Option B

Explanation:

(20 x 16) women can complete the work in 1 day.

1

∴ 1 woman's 1 day's work = $\frac{1}{320}$

(16 x 15) men can complete the work in 1 day.

1 ∴ 1

man's 1 day's work =

240

So, required ratio = $\frac{1}{240} : \frac{1}{320}$

$\frac{1}{240} : \frac{1}{320}$

= :

$\frac{3}{4}$

= 4 : 3 (cross multiplied)

26. A and B can do a work in 8 days, B and C can do the same work in 12 days. A, B and C together can finish it in 6 days. A and C together will do it in :

A. 4 days

B. 6 days

C. 8 days

D. 12 days

26. Answer: Option C

Explanation:

$$(A + B + C)'s\ 1\ day's\ work = \frac{1}{6};$$

$$(A + B)'s\ 1\ day's\ work = \frac{1}{8};$$

$$(B + C)'s\ 1\ day's\ work =$$

$$\frac{12}{\left(\frac{1}{6} - \left(\frac{1}{8} + \frac{1}{12}\right)\right)} = \frac{12}{\left(\frac{1}{3} - \frac{5}{24}\right)}$$

$$\therefore (A + C)'s\ 1\ day's\ work = \frac{3}{24} = 2 \times \frac{1}{8}$$

So, A and C together will do the work in 8 days.

27. A can finish a work in 24 days, B in 9 days and C in 12 days. B and C start the work but are forced to leave after 3 days. The remaining work was done by A in:

A. 5 days

B. 6 days

C. 10 days

D. 10 days

2

27. Answer: Option C

Explanation:

$$(B + C)'s\ 1\ day's\ work = \left(\frac{1}{9} + \frac{1}{12}\right) = \frac{7}{36}$$

$$\text{Work done by B and C in 3 days} = \left(\frac{7}{36} \times 3\right) = \frac{7}{12}$$

$$\text{Remaining work} = \left(1 - \frac{7}{12}\right) = \frac{5}{12}$$

Now, $\frac{1}{24}$ work is done by A in 1 day.

$$\text{So, } \frac{5}{12} \text{ work is done by A in } \left(24 \times \frac{5}{12}\right) = 10 \text{ days.}$$

28. X can do a piece of work in 40 days. He works at it for 8 days and then Y finished it in 16 days. How long will they together take to complete the work?

- A.131days B.15 days
3
C.20 days D.26 days

28. Answer: Option A

Explanation:

Work done by X $\left(\frac{1}{40} \times 8\right) = \frac{1}{5}$ in 8 days =

Remaining work $\left(1 - \frac{1}{5}\right) = \frac{4}{5} = 1 -$

4

Now, work is done by Y in 16 days.

5

work will be done by Y in 16 x $\left(\frac{5}{4}\right)$ Whole = 20 days. www.AptitudeAcademy.co.in

4

\therefore X's 1 day's work = $\frac{1}{40}$, Y's 1 day's work = $\frac{1}{20}$

(X + Y)'s 1 day's work $\left(\frac{1}{40} + \frac{1}{20}\right) = \frac{3}{40}$

$\left(\frac{40}{3}\right)$

$\frac{3}{4}$

1

Hence, X and Y will together complete the work in = 13 days

29.

A and B can do a job together in 7 days. A is 1 times as efficient as B. The same job can be done by A alone in :

- A.9 days B.11 days
3

$$\frac{1}{4} \text{C.12 days}$$

$$\frac{1}{4} \text{D.16 days}$$

29. Answer: Option B

Explanation:

$$(\text{A's 1 day's work}) : (\text{B's 1 day's work}) = \frac{7}{1} = 7 : 4.$$

Let A's and B's 1 day's work be $7x$ and $4x$ respectively.

$$\text{Then, } 7x + 4x = \frac{1}{11} \Rightarrow 11x = \frac{1}{11} \Rightarrow x = \frac{1}{121}$$

\therefore A's 1 day's work = $\frac{1}{11}$

30. A and B together can do a piece of work in 30 days. A having worked for 16 days, B finishes the remaining work alone in 44 days. In how many days shall B finish the whole work alone?

A.30 days

B.40 days

C.60 days

D.70 days

30. Answer: Option C Explanation:

Let A's 1 day's work = x and B's 1 day's work = y .

$$\text{Then, } x + y = \frac{1}{30} \text{ and } 16x + 44y = \frac{1}{30}$$

$$\text{Solving these two equations, we get: } x = \frac{1}{60} \text{ and } y = \frac{1}{60}$$

$$\therefore \text{B's 1 day's work} = \frac{1}{60}$$

Hence, B alone shall finish the whole work in 60 days.

31. If 9 men working 6 hours a day can do a work in 88 days. Then 6 men working 8 hours a day can do it in how many days?

- A. 99 B. 69
C. 89 D. 55

Solution: From the above formula i.e $(m_1 * t_1 / w_1) = (m_2 * t_2 / w_2)$ so $(9 * 6 * 88 / 1) = (6 * 8 * d / 1)$ on solving, $d = 99$ days.

32. If 34 men completed $2/5$ th of a work in 8 days working 9 hours a day. How many more man should be engaged to finish the rest of the work in 6 days working 9 hours a day?

- A. 120 B. 136
C. 60 D. 102

Solution: From the above formula i.e $(m_1 * t_1 / w_1) = (m_2 * t_2 / w_2)$
so, $(34 * 8 * 9 / (2/5)) = (x * 6 * 9 / (3/5))$

so $x = 136$ men

number of men to be added to finish the work = $136 - 34 = 102$ men

33. If 5 women or 8 girls can do a work in 84 days. In how many days can 10 women and 5 girls can do the same work?

- A. 14 B. 32
C. 20 D. 24

Solution: Given that 5 women is equal to 8 girls to complete a work
so, 10 women = 16 girls.

Therefore 10 women + 5 girls = 16 girls + 5 girls = 21 girls.

8 girls can do a work in 84 days

then 21 girls ————— ?

Answer = $(8 * 84 / 21) = 32$ days. Therefore 10 women and 5 girls can a work in 32 days

34. Worker A takes 8 hours to do a job. Worker B takes 10 hours to do the same job. How long it take both A & B, working together but independently, to do the same job?

- A. $40/9$ B. 56 C. 12 D. $12 \frac{1}{8}$

Solution: A's one hour work = $1/8$.

B's one hour work = $1/10$

(A+B)'s one hour work = $1/8 + 1/10 = 9/40$

Both A & B can finish the work in $40/9$ days

35. A can finish a work in 18 days and B can do the same work in half the time taken by A. Then, working together, what part of the same work they can finish in a day?

- A. $1/9$ B. $1/7$
C. $1/6$ D. $4/6$

Solution: Given that B alone can complete the same work in days = half the time taken by A = 9 days
A's one day work = $1/18$
B's one day work = $1/9$
(A+B)'s one day work = $1/18 + 1/9 = 1/6$

36. A is twice as good a workman as B and together they finish a piece of work in 18 days. In how many days will A alone finish the work.

- A. 27 B. 47
C. 17 D. 57

Solution: if A takes x days to do a work then

B takes 2x days to do the same work

$$\Rightarrow \frac{1}{x} + \frac{1}{2x} = \frac{1}{18} =$$

$$\Rightarrow \frac{3}{2x} = \frac{1}{18}$$

$$\Rightarrow x = 27 \text{ days.}$$

Hence, A alone can finish the work in 27 days.

37. A can do a certain work in 12 days. B is 60% more efficient than A. How many days does B alone take to do the same job?

- A. $16/4$ B. $15/2$
C. 12 D. $14/3$

Solution: Ratio of time taken by A & B = 160:100 = 8:5

Suppose B alone takes x days to do the job.

$$\text{Then, } 8:5::12:x =$$

$$\Rightarrow 8x = 5 \times 12 \Rightarrow x =$$

$$= 15/2 \text{ days.}$$

38. A can do a piece of work in 7 days of 9 hours each and B alone can do it in 6 days of 7 hours each. How long will they take to do it working together 8 $2/5$ hours a day?

- A. 11 B. 4
C. 7 D. 3

Solution: A can complete the work in $(7 \times 9) = 63$ days

B can complete the work in $(6 \times 7) = 42$ days

\Rightarrow A's one hour's work = $1/63$ and

B's one hour work = $1/42$

(A+B)'s one hour work = $1/63 + 1/42 = 5/126$

Therefore, Both can finish the work in $126/5$ hours.

Number of days of $8 \frac{2}{5}$ hours each = $(126 * 5 / (5 * 42)) = 3$ days

39. A takes twice as much time as B or thrice as much time to finish a piece of work. Working together they can finish the work in 2 days. B can do the work alone in ?

- A. 7 B. 6
C. 8 D. 9

Solution: Suppose A, B and C take $x, x/2$ and $x/3$ hours respectively finish the work then $1/x + 2/x + 3/x = 1/2$

$$\Rightarrow 6/x = 1/2$$

$$\Rightarrow x = 12$$

So, B takes 6 hours to finish the work.

40. X can do $\frac{1}{4}$ of a work in 10 days, Y can do 40% of work in 40 days and Z can do $1/3$ of work in 13 days. Who will complete the work first?

- A. X B. Y
C. Z D. NONE

Solution: Whole work will be done by X in $10 * 4 = 40$ days.

Whole work will be done by Y in $(40 * 100 / 40) = 100$ days.

Whole work will be done by Z in $(13 * 3) = 39$ days

Therefore, Z will complete the work first.

41) If 9 men working 6 hours a day can do a work in 88 days. Then 6 men working 8 hours a day can do it in how many days?

Solution: From the above formula i.e $(m_1 * t_1 / w_1) =$

$(m_2 * t_2 / w_2)$ so $(9 * 6 * 88 / 1) = (6 * 8 * d / 1)$ on solving, $d = 99$ days.

- A. 12 B. 35 C. 100 D. 99

42) If 34 men completed $2/5$ th of a work in 8 days working 9 hours a day. How many more man should be engaged to finish the rest of the work in 6 days working 9 hours a day?

Solution: From the above formula i.e $(m_1 * t_1 / w_1) = (m_2 * t_2 / w_2)$

so, $(34 * 8 * 9 / (2/5)) = (x * 6 * 9 / (3/5))$

so $x = 136$ men number of men to be added to finish the work =
 $136 - 34 = 102$ men

A.100 B.21 C.57 D.102

43) If 5 women or 8 girls can do a work in 84 days. In how many days can 10 women and 5 girls can do the same work?

Solution: Given that 5 women is equal to 8 girls to complete a work
so, 10 women = 16 girls.

Therefore 10 women + 5 girls = 16 girls + 5 girls = 21 girls.

8 girls can do a work in 84 days

then 21 girls _____ ?

Answer = $(8 \times 84 / 21) = 32$ days. Therefore 10 women and 5 girls can do a work in 32 days

A.32 B.45 C.89 D.NONE

44) Worker A takes 8 hours to do a job. Worker B takes 10 hours to do the same job. How long it take both A & B, working together but independently, to do the same job?

A.40 B.9 C.40/9 D.90

Solution: A's one hour work = $1/8$.

B's one hour work = $1/10$

(A+B)'s one hour work = $1/8 + 1/10 = 9/40$

Both A & B can finish the work in $40/9$ days

45) A can finish a work in 18 days and B can do the same work in half the time taken by A. Then, working together, what part of the same work they can finish in a day?

A.1/6 B.7/8 C.7/5 D.9

Solution: Given that B alone can complete the same work in days = half the time taken by A = 9 days A's one day work = $1/18$

B's one day work = $1/9$

(A+B)'s one day work = $1/18 + 1/9 = 1/6$

46) A is twice as good a workman as B and together they finish a piece of work in 18 days. In how many days will A alone finish the work.

A. 27 B. 78 C. 99 D. NONE

Solution: if A takes x days to do a work then

B takes $2x$ days to do the same work

$$\Rightarrow \frac{1}{x} + \frac{1}{2x} = \frac{1}{18} =$$

$$\Rightarrow \frac{3}{2x} = \frac{1}{18}$$

$$\Rightarrow x = 27 \text{ days.}$$

Hence, A alone can finish the work in 27 days.

47) A can do a certain work in 12 days. B is 60% more efficient than A. How many days does B alone take to do the same job?

A. $\frac{2}{4}$ B. $\frac{5}{6}$ C. $\frac{8}{9}$ D. $\frac{15}{2}$

Solution: Ratio of time taken by A & B = 160:100 = 8:5

Suppose B alone takes x days to do the job.

Then, 8:5::12:x =

$$\Rightarrow 8x = 5 \cdot 12 \Rightarrow x =$$

$$= \frac{15}{2} \text{ days.}$$

48) A can do a piece of work in 7 days of 9 hours each and B alone can do it in 6 days of 7 hours each. How long will they take to do it working together 8 $\frac{2}{5}$ hours a day?

A. 3 B. 5 C. 7 D. NONE

Solution: A can complete the work in $(7 \cdot 9) = 63$ days

B can complete the work in $(6 \cdot 7) = 42$ days

$$\Rightarrow \text{A's one hour's work} = \frac{1}{63} \text{ and}$$

$$\text{B's one hour work} = \frac{1}{42}$$

$$(\text{A+B})\text{'s one hour work} = \frac{1}{63} + \frac{1}{42} = \frac{5}{126}$$

Therefore, Both can finish the work in $\frac{126}{5}$ hours.

$$\text{Number of days of } 8 \frac{2}{5} \text{ hours each} = \left(\frac{126 \cdot 5}{5 \cdot 42} \right) = 3 \text{ days}$$

49) A takes twice as much time as B or thrice as much time to finish a piece of work. Working together they can finish the work in 2 days. B can do the work alone in ?

A. 44 B. 6 C. 8 D. 9

Solution: Suppose A,B and C take $x, x/2$ and $x/3$ hours respectively finish the work then $1/x + 2/x + 3/x = 1/2$

$$\Rightarrow 6/x = 1/2$$

$$\Rightarrow x = 12$$

So, B takes 6 hours to finish the work.

50) A can do $\frac{1}{4}$ of a work in 10 days, Y can do 40% of work in 40 days and Q can do $\frac{1}{3}$ of work in 13 days. Who will complete the work first?

A. Y B.Q C.A D.ALL

Solution: Whole work will be done by A in $10 \times 4 = 40$ days.

Whole work will be done by Y in $(40 \times 100 / 40) = 100$ days.

Whole work will be done by Q in $(13 \times 3) = 39$ days

Therefore, Q will complete the work first.

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ANSWERS:

**1. D 2. C 3.B 4.B 5.B
6.A 7.C 8.C 9.C 10.D**

11.C 12.B 13.D 14.A 15.C 16.B 17.B

18.C 19.C 20.B

21.B 22.C 23.A 24.A 25.B

26.C 27.C 28.A 29.B 30.C

31. A 32. D 33. B 34. A 35.C

36. A 37. B 38. D 39. B 40. C

41. D 42.D 43.A 44.C 45.A

46.A 47.D 48.A 49.B 50.B

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MOCK TEST:

1. A can do a piece of work in 30 days while B alone can do it in 40 days. In how many days can A and B working together do it ?

(a) $17 \frac{1}{7}$ (b) $27 \frac{1}{7}$ (c) $42 \frac{3}{4}$ (d) 70

2. A and B together can complete a piece of work in 35 days while A alone can complete the same work in 60 days. B alone will be able to complete the same work in :

(a) 42 days (b) 72 days (c) 84 days (d) 96 days

3. A can do a piece of work in 7 days of 9 hours each and B can do it in 6 days of 7 hours each. How long will they take to do it, working together $8 \frac{2}{5}$ hours a day ?

(a) 3 days' (b) 4 days (c) $4 \frac{1}{2}$ days (d) None of these

4. A can do a piece of work in 15 days and B alone can do it in 10 days. B works at it for 5 days and then leaves. A alone can finish the remaining work in :

(a) $13 \frac{1}{2}$ (b) $15 \frac{1}{2}$ days (c) 8 days (d) 9 days

5. A can do $\frac{1}{3}$ of the work in 5 days and B can do $\frac{2}{5}$ of the work in 10 days. In how many days both A and B together can do the work?

(a) $7 \frac{3}{4}$ (b) $8 \frac{4}{5}$ (c) $9 \frac{3}{8}$ (d) 10

6. A can do a piece of work in 80 days. He works at it for 10 days and then B alone finishes the remaining work in 42 days. The two together could complete the work in :

(a) 24 days (b) 25 days (c) 30 days (d) 35 days

7. A and B can together finish a work in 30 days. They worked at it for 20 days and then B left. The remaining work was done by A alone in 20 more days. A alone can finish the work in :

(a) 48 days (b) 50 days (c) 54 days (d) 60 days

8. A and B can do a piece of work in 45 days and 40 days respectively. They began to do the work together but A leaves after some days and then B completed the remaining work in 23 days. The number of days after which A left the work was:

(a) 6 (b) 8 (c) 9 (d) 12

9. A does half as much work as B in three-fourth of the time. If together they take 18 days to complete the work, how much time shall B take to do it ?

(a) 30 days (b) 35 days (c) 40 days (d) none of these

10. A can do a certain job in 12 days. B is 60% more efficient than A. The number of days, it takes B to do the same piece of work, is :

(a) 6 (b) $6\frac{1}{4}$ (c) $7\frac{1}{2}$ (d) 8

11. A can do a certain job in 25 days which B alone can do in 20 days. A started the work and was joined by B after 10 days. The number of days taken in completing the work was :

(a) $12\frac{1}{2}$ (b) $14\frac{2}{9}$ (c) 15 (d) $16\frac{2}{3}$

12. A is twice as good a workman as B and together they finish a piece of work in 14 days. The number of days taken by A alone to finish the work, is :

(a) 11 (b) 21 (c) 28 (d) 42

13. A is thrice as good a workman as B and takes 10 days less to do a piece of work than B takes. B alone can do the whole work in :

(a) 12 days (b) 15 days (c) 20 days (d) 30 days

14. A can do a piece of work in 14 days which B can do in 21 days. They begin together but 3 days before the completion of the work, A leaves off. The total number of days to complete the work is :

(a) $6\frac{3}{5}$ (b) $8\frac{1}{2}$ (c) $10\frac{1}{5}$ (d) $13\frac{1}{2}$

15. If Ramesh, Suresh and Harish can do a piece of work in 15 days, 10 days and 6 days respectively, how long will they take to do it, if all the three work at it together?

(a) 3 days (b) $3\frac{1}{2}$ days (c) $3\frac{9}{20}$ days (d) $3\frac{3}{20}$ days

16. A and B can do a piece of work in 72 days; B and C can do it in 120 days; A and C can do it in 90 days. In what time can A alone do it ?

(a) 150 days (b) 120 days (c) 100 days (d) 80 days

17. A and B can do a piece of work in 5 days; B and C can do it in, 7 days; A and C can do it in 4 days. Who among these will take the least time if put to do it alone?

(a) A (b) B (c) C (d) Data inadequate

18. If A, B and C together can finish a piece of work in 4 days; A alone can do it in 12 days and B in 18 days, then C alone can do it in :

(a) 21 days (b) 16 days (c) 14 days (d) 9 days

19. A and B can do a piece of work in 18 days; Band C can do it in 24 days; A and C can do it in 36 days. In how many days can they do it all working together'?

(a) 12 (b) 13 (c) 16 (d) 26

20. A and B together can do a piece of work in 12 days, which Band C together can do in 16 days. After A has been working at it for 5 days and B for 7 days, C finishes in 13 days. In how many days C alone will do the work

(a) 16 (b) 24 (c) 36 (d) 48

21. A is twice as good a workman as B and together they complete a work in 15 days. In how many days can the work be completed by B alone?)

(a) $22\frac{1}{2}$ (b) 30 (c) $37\frac{1}{2}$ (d) 45

22. 45 men can complete a work in 16 days. Six days after they started working, 30 more men joined them. How many days will they now take to complete the remaining work?

(a) 4 (b) 5 (c) 6 (d) 8

23. 12 men can complete a work in 18 days. Six days after they started working, 4 men joined them. How many days will all of them take to finish the remaining work?

(a) 9 (b) 10 (c) 12 (d) 15

24. Twelve men can complete a work in 8 days. Three days after they started the work, 3 more men joined. In how many days will all of them together complete the remaining work?

(a) 2 (b) 4 (c) 5 (d) 6

25. A, B and C are employed to do a piece of work for Rs. 529. A and C are supposed to finish $\frac{19}{23}$ of the work together. How much shall be paid to B ?

(a) Rs. 82 (b) Rs. 92 (c) Rs. 300 (d) Rs. 437

26. A job is completed by 10 men in 20 days and by 20 women in 15 days. How many days will it take for 5 men and 10 women to finish that work?

(a) $17\frac{1}{2}$ (b) $17\frac{1}{7}$ (c) 17 (d) $17\frac{1}{120}$

27. A piece of work can be done by 6 men and 5 women in 6 days or 3 men and 4 women in 10 days. It can be done by 9 men and 15 women in :

(a) 1 day (b) 2 days (c) 3 days (d) 4 days

28. 4 men and 6 women finish a job in 8 days, while 3 men and 7 women finish it in 10 days. In how many days will 10 women working together finish it ?

(a) 24 (b) 32 (c) 36 (d) 40

29. 12 children take 16 days to complete a work which can be completed by 8 adults in 12 days. 16 adults started working and after 3 days 10 adults left and 4 children joined them. How many days will it take them to complete the remaining work?

(a) 6 (b) 8 (c) 4 (d) 3

30. Ram can do a piece of work in 8 days which Shyam can finish in 12 days. If they work at it on alternate days with Ram beginning, in how many days, the work will be finished?

(a) $9\frac{1}{3}$ (b) $9\frac{1}{2}$ (c) $9\frac{1}{24}$ (d) $10\frac{1}{3}$

31. A and B working separately can do a piece of work in 9 and 12 days respectively. If they work for a day alternately, A beginning, in how many days the work will be completed?

(a) $10\frac{1}{2}$ (b) $10\frac{1}{3}$ (c) $10\frac{1}{4}$ (d) $10\frac{2}{3}$

32. A, B and C can do a piece of work in 11 days, 20 days and 55 days respectively, working alone. How soon can the work be done if A is assisted by B and C on alternate days?

(a) 7 days (b) 8 days (c) 9 days (d) 10 days

33. Machines A and B produce 8000 clips in 4 and 6 hours respectively. If they work alternately for 1 hour, A starting first, then 8000 clips will be produced in :

(a) $4\frac{1}{3}$ hours (b) $4\frac{2}{3}$ (c) $5\frac{1}{3}$ hrs (d) $5\frac{2}{3}$ hrs

34. A father can do a job as fast as his two sons working together. If one son does the job in 3 hours and the other in 6 hours, how many hours does it take the father to do the job?

(a) 1 (b) 2 (c) 3 (d) 4

35. A sum of money is sufficient to pay A's wages for 21 days and B's wages for 28 days. The same money is sufficient to pay the wages of both for:

(a) 12 days (b) 14 days (c) $12\frac{1}{4}$ days (d) $24\frac{1}{2}$ days

36. 2 men and 3 boys can do a piece of work in 10 days while 3 men and 2 boys can do the same work in 8 days. In how many days can 2 men and 1. boy do the work? (a) $12\frac{1}{2}$ days (b)14 (c)17 (d)8

37. A is twice as good a workman as B and together they finish a piece of work in 18 days. In how many days will A alone finish the work?

a. 37 b. 27 days c. 67 d. 44

38. A and B undertake to do a piece of work for Rs. 600. A alone can- do it in 6 days while B alone can do it in 8 days. With the help of C, they finish it in 3 days. Find the share of A? a. Rs. 400

b. Rs. 800

c. Rs. 300

d. none

39. A and B undertake to do a piece of work for Rs. 600. A alone can- do it in 6 days while B alone can do it in 8 days. With the help of C, they finish it in 3 days. Find the share of B? a.Rs. 400

b.Rs. 800

c.Rs. 300

d.Rs.225

40. A and B undertake to do a piece of work for Rs. 600. A alone can- do it in 6 days while B alone can do it in 8 days. With the help of C, they finish it in 3 days. Find the share of c?

(a) Rs. 75 b. 27 days c. 67 d. 44

41. A and B can do a piece of work in 12 days; Band C can do it in 15 days ; A and C can do it in 20 days. In how many days will A, Band' C finish it, working all together?

(a) 10 days b. 27 days c. 67 d. 44

42. A and B can do a piece of work in 12 days; Band C can do it in 15 days ; A and C can do it in 20 days. find the number of days taken by A to finish it working alone.

(a) 30 days b. 27 days c. 67 d. none

43. A and B can do a piece of work in 12 days; Band C can do it in 15 days ; A and C can do it in 20 days. find the number of days taken by B to finish it working alone.

(a) 30 days b. 20 days c. 67 d. none

44. A and B can do a piece of work in 12 days; Band C can do it in 15 days ; A and C can do it in 20 days. find the number of days taken by C to finish it working alone.

(a) 60 days (B) 30 days C. 20 days D. NONE

45. A is twice as good a workman as B and together they finish apiece of work in 18 days. In how many days will A alone finish the work? (a) 27 days (B) 30 days C. 20 days D. NONE

46. A and B undertake to do a piece of work for Rs. 600. A alone can- do it in 6 days while B alone can do it in 8 days. With the help of C, they finish it in 3 days. Find the share of A?

(a) Rs. 300 (B) 30 days C. 20 days D. NONE

47. A and B undertake to do a piece of work for Rs. 600. A alone can- do it in 6 days while B alone can do it in 8 days. With the help of C, they finish it in 3 days. Find the share of B?

(a) Rs.225 (B) 30 days C. 20 days D. NONE

48. A can do a piece of work in 10 days which B alone can do in 12 days. In how many days will they finish the work, both working together?

(a) $5\frac{5}{11}$ days b. 27 days c. 67 d. 44

49. Two persons A and B working together can dig a trench in 8 hours while A alone can dig it in 12 hours. In how many hours B alone can dig such a trench?

(a) 25 hours (b) 24 hours (c) 42 hours (d) none

50. Ex. 4. 3 men can complete a piece of work in 6 days. Two days after they started the work, 3 more men joined them. How many days will they take to complete the remaining work?

(a) 25 hours (b) 24 hours (C) 2 days d) none

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ANSWERS:

1. (a) 2.(c) 3.(a) 4.(b) 5.(c)

6.(c) 7.(d) 8.(c) 9.(a)10. (c)

11.(d) 12.(b) 13.(b) 14.(c) 15.(a)

16.(b) 17.(a) 18.(d) 19(c)20. (b)

21.(d) 22(c) 23.(a) 24.(b) 25.(b)

26.(b) 27.(c) 28(d) 29(a)30.(b)

31.(c) 32.(b) 33.(b) 34.(b) 35.(a)

36.A 37.B 38.C 39.D 40.A

41.A 42.A 43.B 44.A 45. A

46.A 47.A 48.A 49.B 50.C