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Time and work Questions for CDS, CLAT and SSC Exams.

Time and work Quiz 2

Directions: Study the following Questions carefully and choose the right answer:

1. P can finish a work in 25 days and Q can do the same work in 20 days. Q worked for 8 days and left the job. In how many days, P alone can finish the remaining work?

A. 5 days   B. 10 days   C. 15 days   D. 17 days

2. Nitin and Nirdosh together can complete a piece of work in 6 days. If Nitin alone can complete the same work in 24 days; in how many days can Nirdosh alone complete that work?

A. 8   B. 12   C. 14   D. 15

3. A, B and C together earn Rs. 300 per day, while A and C together earn Rs. 188 and B and C together earn Rs. 152. The daily earning of C is:

A. Rs. 40   B. Rs. 68   C. Rs. 112   D. Rs. 150

4. 10 men and 15 women together can complete a work in 6 days. It takes 100 days for one man alone to complete the same work. How many days will be required for one woman alone to complete the same work?

A. 125   B. 150   C. 200   D. 225

5. A girl can do a job in 10 days, Her mother takes 25 days and her sister finishes it in 20 days. How long will they take to complete the job if they all together?

A. Less than 5 days   B. Exactly 5 days   C. Approximately 5.3 days   D. More than 6 days

6. A man can do a piece of work in 5 days, but with the help of his son, he can do it in 3 days. In what time can the son do it alone?

A. $6\frac{1}{2}$ days   B. 7 days   C. $7\frac{1}{2}$ days   D. 8 days

7. 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

8. 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

9. If 12 men and 16 boys can do a piece of work in 5 days; 13 men and 24 boys can do it in 4 days, then the ratio of the daily work done by a man to that of a boy is :

A. 2 : 1   B. 3 : 1   C. 3 : 2   D. 5 : 4
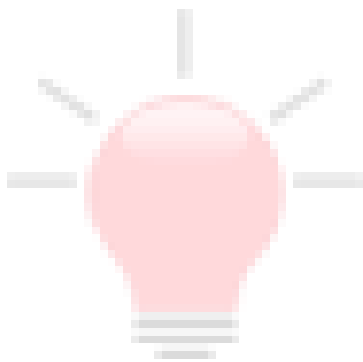
10. A can do a piece of work in 10 days and B can do the same piece of work in 20 days. They start the work together, but after 5 days A leaves. B will do the remaining piece of work in:

A. 6 days   B. 8 days   C. 5 days   D. 10 days

Correct Answers:

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

 Explanations:

1.

Q's 8 day's work = $\left[\dfrac{1}{20} \times 8\right] \Rightarrow \dfrac{2}{5}$

Remaining work = $\left[1 - \dfrac{2}{5}\right] \Rightarrow \dfrac{3}{5}$.

Now, $\dfrac{1}{25}$ work is done by P in 1 day.

∴ $\dfrac{3}{5}$ work is done by P in $\left[25 \times \dfrac{3}{5}\right] \Rightarrow 15$ days.

Hence, option C is correct.

2.

(Nitin + Nirdosh)'s 1 day's work = $\dfrac{1}{6}$

Nitin's 1 day's work = $\dfrac{1}{24}$

∴ Nirdosh's 1 day's work

= $\left[\dfrac{1}{6} - \dfrac{1}{24}\right] \Rightarrow \dfrac{3}{24} \Rightarrow \dfrac{1}{8}$.

Hence, Nirdosh can complete the work in 8 days.
Hence, option A is correct.

3. B's daily earning = Rs. (300 – 188) = Rs. 112.
A's daily earning = Rs. (300 – 152) = Rs. 148.
C's daily earning = Rs. [300 – (112 + 148)] = Rs. 40.

Hence, option A is correct.

4. 1 man's 1 day's work

$= \frac{1}{100}$, (10 men + 15 women)'s 1 day's work $= \frac{1}{6}$.

15 women's 1 day's work

$= \left(\frac{1}{6} - \frac{10}{100}\right) = \left(\frac{1}{6} - \frac{1}{10}\right) = \frac{1}{15}$.

$\therefore$ 1 woman's 1 day's work $= \frac{1}{225}$.

Then, 1 woman alone can complete the work in 225 days.

Hence, option D is correct.

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5. 1 day's work of the three persons

$= \left[\frac{1}{10} + \frac{1}{25} + \frac{1}{20}\right]$

$\Rightarrow \frac{10 + 4 + 5}{100} = \frac{19}{100}$.

So all the three together will complete the work in

$\frac{100}{19} = 5.3$ days

Hence, option C is correct.

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6. Son's 1 day's work

$= \left(\frac{1}{3} - \frac{1}{5}\right) = \frac{2}{15}$.

$\therefore$ The son alone can do the work in

$\frac{15}{2} = 7\frac{1}{2}$ days.

Hence, option C is correct.

7. To solve this question, we can apply a short trick approach;

A and B do a piece of work in 'a' and 'b' days, respectively. Both begin together but after some days, A leaves off and the remaining work is completed by B in 'x' days. Then, the time after which A left, is given by $T = \dfrac{(b - x)a}{a + b}$.

Given that a = 45 days, b = 40 days, x = 23, T = ?

By the short trick approach, we get

$$= \dfrac{(40 - 23)45}{45 + 40}$$

$$= \dfrac{17 \times 45}{85} = 9 \text{ days.}$$

Hence, option C is correct.

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8. (A + B)'s 1 day's work

$$= \left(\dfrac{1}{11} + \dfrac{1}{20}\right) = \dfrac{31}{220}.$$

(A + C)'s 1 day's work

$$= \left(\dfrac{1}{11} + \dfrac{1}{55}\right) = \dfrac{6}{55}.$$

Work done in 2 days

$$= \left(\dfrac{31}{220} + \dfrac{6}{55}\right) = \dfrac{55}{220} = \dfrac{1}{4}.$$

Now, $\dfrac{1}{4}$ work is done by A in 2 days.

∴ Whole work will be done in (4 × 2) = 8 days.

Hence, option B is correct.

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

Then, 12x + 16y

$= \dfrac{1}{5}$ and 13x + 24y $= \dfrac{1}{4}$.

Solving these two equations, we get: x

$= \dfrac{1}{100}$ and y $= \dfrac{1}{200}$.

∴ Required ratio = x : y

$= \dfrac{1}{100} : \dfrac{1}{200} = 2 : 1$.

Hence, option A is correct.

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10.   To solve this question, we can apply a short trick approach:

A can do a work in x days and B can do the same work in y days. If they work together for 'k' days and A goes away, then the number of days in which B finishes the y work is given by

$y - (1 + \dfrac{y}{x})$ k days.

A's time = x = 10 days
B's time = y = 20 days'
work together time = k = 5 days
By the short trick approach we get,

$= 20 - \left(1 + \dfrac{20}{10}\right) \times 5$ days.

= 20 − (1 + 2) × 5 days
= (20 − 15) days = 5 days.
Hence, option C is correct.