[LEVEL – BEGINNER]

1. Worker A takes 8 hours to do a job. Worker B takes 10 hours to do a job. How long should it take both A and B, working together to do same job.

   A] 40/9 B] 24/9 C] 34/9 D] 44/9

2. A and B can together complete a piece of work in 4 days. If A alone can complete the same work in 12 days, in how many days can B alone complete that work?

   A] 4 days B] 5 days C] 6 days D] 7 days

3. A does a work in 10 days and B does the same work in 15 days. In how many days they together will do the same work?

   A] 5 days B] 6 days C] 7 days D] 8 days

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

   A] 1/5 B] 1/6 C] 1/7 D] 1/8

5. P can finish a work in 18 days. Q can finish the same work in 15 days. Q worked for 10 days and left the job. how many days does P alone need to finish the remaining work?

   A] 8 B] 5 C] 4 D] 6

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

   A] 27 days B] 54 days C] 56 days D] 68 days

7. 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] 15/4days B] 15/2days C] 15 days D] 12 days

8. A can do a job in 16 days, B can do same job in 12 days. With the help of C they did the job in 4 days. C alone can do the same job in how many days ?

   A] 5/48 days B] 48/5 days C] 83/5 days D] 93/5 days

9. To complete a work A and B takes 8 days, B and C takes 12 days, A,B and C takes 6 days. How much time A and C will take

   A] 24 days B] 16 days C] 12 days D] 8 days

10. 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] 40 days B] 35 days C] 30 days D] 25 days

11. 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] 15 days B] 10 days C] 9 days D] 8 days

12. 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] 5 days B] 6 days C] 7.5 days D] 8.5 days

13. P is able to do a piece of work in 15 days and Q can do the same work in 20 days. If they can work together for 4 days, what is the fraction of work left?

    A] 8/15 B] 7/15 C] 11/15 D] 2/11

Directions for 14 to 15: Working together, A and B can do a job in 6 days. B and C can do the same job in 10 days, while C and A can do it in 7.5 days.

14. How many days will it take if all A, B and C work together to complete the job?

    A] 8 B] 5 C] 3 D] 7

15. How many days will it take for A alone to complete the job?

A] 8 B] 6 C] 10 D] 20

16. A work can be finished in 16 days by twenty women. The same work can be finished in fifteen days by sixteen men. The ratio between the capacity of a man and a woman is

A] 1:3 B] 4:3 C] 2:3 D] 2:1

17. The ratio of efficiencies of A, B and C is 3:4:6. If they completed a piece of work working together, what fraction of the work is done by A?

A] 4/9 B] 1/3 C] 3/13 D] None

18. A and B working together can complete a work in 10 days. B and C working together complete the work in 12 days. A and C working together complete the work in 15 days. Who is the slowest of three?

A] A B] B C] C D] Can't be determined

19. If the ratio of time taken to complete a work by P, Q and R is 2:3:4. Then what is the ratio of work done by P, Q and R in 1 Hour?

A] 4:3:2 B] 6:4:3 C] 4:6:9 D] 4:9:16

20. P can complete a piece of work, working alone in 3 days. Q can complete work in 5 days. If they work in alternate days the work would be completed in least no. of days if

A] P starts B] Q starts

C] irrespective of who starts D] None of these

[LEVEL – INTERMEDIATE]

1. A can do a piece of work in 4 hours . A and C together can do it in just 2 hours, while B and C together need 3 hours to finish the same work. In how many hours B can complete the work ?

   A] 10 hours B] 12 hours C] 16 hours D] 18 hours

2. A completes 80% of a work in 20 days. Then B also joins and A and B together finish the remaining work in 3 days. How long does it need for B if he alone completes the work?

   A] 35/2 B] 75/2 C] 37/2 D] 85/2

3. A alone can do a piece of work in 6 days and B alone in 8 days. A and B undertook to do it for Rs. 3200. With the help of C, they completed the work in 3 days. How much is to be paid to C

   A] Rs. 300 B] Rs. 400 C] Rs. 500 D] Rs. 600

4. 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] 30 days B] 40 days C] 50 days D] 60 days

5. 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 how many days?

   A] 3 days B] 4 days C] 5 days D] 6 days

6. 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 remaining work were ?

   A] 40/3 days B] 50/3 days C] 20/3 days D] 16 days

7. 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] 6 days B] 7 days C] 8 days D] 9 days

8. A alone can complete a work in 16 days and B alone can do in 12 days. Starting with A, they work on alternate days. The total work will be completed in

   A] 48/7 days B] 13 days C] 55/4 days D] 14 days

9. 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] 8 B] 10 C] 9 D] 7

10. A, B and C, can complete a piece of work individually in 15, 30 and 40 days respectively. They started the work together and the A & B left 2 days and 4 days before the completion of the work respectively. In how many days was the work ends?

    A] 152/15 B] 136/15 C] 10 D] 20/11

11. A can build up a structure in 8 days and B can break it is 3 days. A has worked for 4 days and then B joined to work with A for another 2 days only. In how many days will A alone build up the remaining part of the structure?

    A] 22 B] 44/3 C] 22/3 D] 77/4

12. P can do a work in 24 days. Q can do the same work in 9 days and R can do the same in 12 days. Q and R start the work and leave after 3 days. P finishes the remaining work in --- days.

    A] 7 B] 8 C] 9 D] 10

13. P takes twice as much time as Q or thrice as much time as R to finish a piece of work. They can finish the work in 2 days if work together. How much time will Q take to do the work alone?

A] 4 B] 5 C] 6 D] 7

14. Anil and Suresh are working on a special assignment. Anil needs 6 hours to type 32 pages on a computer and Suresh needs 5 hours to type 40 pages. If both of them work together on two different computers, how much time is needed to type an assignment of 110 pages?

A] 7 hour 15 minutes B] 7 hour 30 minutes

C] 8 hour 15 minutes D] 8 hour 30 minutes

15. P is 30% more efficient than Q. P can complete a work in 23 days. If P and Q work together, how much time will it take to complete the same work?

A] 9 B] 11 C] 13 D] 15

16. A, B and C can individually completes a piece of work in 30, 50 and 75 days respectively. They worked on 1 day each with A starting the work followed by B the next day and C the next day. They continued working in this way till the 30th day after which the remaining work is completed by B and C working on alternate days starting with B on 31st day. In how many days was the work completed?

A] 35 B] 40 C] 45 D] 50

17. 20 men can finish a piece of work in 30 days. After how many days should 5 men leave the work so that it is finished in 35 days?

A] 5 B] 15 C] 10 D] 12

18. P can complete a piece of work in 20 days and Q in 30 days. P worked alone for 4 days and then Q completed the remaining work along with R in 18 days. In how many days can R working alone complete the work?

A] 60 days B] 65 days C] 80 days D] 90 days

19. Four persons A, B, C and D produced 256 pieces of item P in 8 hours. B is twice as efficient as A.D is 25% less efficient than A but is three times as efficient as C. How many pieces did B produce?

A] 128 B] 64 C] 48 D] 16

20. P and Q agreed to complete a job in 15 days for Rs 6200. P can complete same job in 50 days Q in 30 days. They had to take R to complete the work in time .Find R's share in money earned by them.

A] Rs.880 B] Rs.1240 C] Rs.1460 D] Rs.2020

[LEVEL – EXPERT]

1. Anil does a work in 90 days, Bittu in 40 days and Chintu in 12 days. They work one after another for a day each, starting with Anil followed by Bittu and then by Chintu. If the total wages received are Rs 360 and Anil, Bittu, Chintu share them in the ratio of the work done, find their respective individual wages.

   A] 40,60,260 B] 36,81,243 C] 42,86,232 D] 38,88,234

2. In Nuts And Bolts factory, one machine produces only nuts at the rate of 100 nuts per minute and needs to be cleaned for 5 minutes after production of every 1000 nuts. Another machine produces only bolts at the rate of 75 bolts per minute and needs to cleaned for10 minutes after production of every 1500 bolts. If both the machines start production at the same time, what is the minimum duration required for producing 9000 pairs of nuts and bolts?

   A] 130 min B] 135 min C] 170 min D] 180 min

3. Aditya, Vedus and Yuvraj alone can do a job for 6 weeks, 9 weeks and 12 weeks respectively. They work together for 2 weeks. Then, Aditya leaves the job. Vedus leaves the job a week earlier to the completion of the work.The job would be completed in:

   A] 4 weeks B] 5 weeks C] 7 weeks D] None

4. Three professors Dr. Gupta, Dr. Sharma, Dr. Singh are evaluating answer script of a subject. Dr. Gupta is 40% more efficient than Dr. Sharma, who is 20% more efficient than Dr. Singh. Dr. Gupta takes 10 days less than Dr. Sharma to complete the evaluation work. Dr. Gupta starts the evaluation work and works for 10 days and then Dr. Sharma takes over. Dr. Sharma evaluates for next 15 days and then stops. In how many days, Dr. Singh can complete the remaining evaluation work?

   A] 7.2 days B] 9.5 days C] 11.5 days D] None

5. Ramesh has two examinations on Wednesday - Engineering mathematics in the morning and Engineering Drawing in the afternoon. He has a fixed amount of time to read the textbooks of both these subjects on Tuesday. During this time he can read 80 pages of Engineering Mathematics and 100 pages of Engineering drawing. Alternatively, he can also read 50 pages of Engineering Mathematics and 250 pages of Engineering drawing. Assume that the amount of time it takes to read one page of the textbook of either subject is constant. Ramesh is confident about Engineering Drawing and wants to devote full time to reading Engineering Mathematics. The number of Engineering Mathematics text book pages he can read on Tuesday is :

   A] 500 B] 300 C] 100 D] 60

6. A, B, C can complete a job in 4 days, 8 days and 16 days respectively. They starts the work and A leaves after one day. The other two completes the job. C got Rs 240 out of the total Rs 900 paid to all three. As A was unwell on first day he could not work at his usual capacity. Find the % of his usual capacity at which he worked on the first day.

   A] 60% B] 75% C] 80% D] 90%

7. There is a group of person in which each can complete a work in 16 days working individually. On the first day one person works, on the second day another person joined him, on the third day one more person joins them and this process continues till the work is completed?

   A] 13/4 B] 13/3 C] 31/6 D] 31/5

8. A and B can do a piece of work in 12 days and 15 days respectively while C can destroy the same work in 20 days. In how many days the work will be completed if A start the work from first day followed by B on second day and then followed by C on third day and so on..?

   A] 20 B] 30 C] 10 D] 113/4

9. Abhishek starts to paint a fence on one day. On the second day, two more friend of Abhishek join him. On the third day 3 more friends of him join him and so on. If the fence is completely painted this way in exactly 20 days, then find the number of days in which 10 girls painting together can paint the fence completely, given that every girl can paint twice as fast as Abhishek and his friends (Boys)?

(Assume that the friends of Abhishek are all boys).

A] 20 B] 40 C] 45 D] 77

10. If A and B work together, they will complete a job in 7.5 days. However, if A works alone and completes half the job and then B takes over and completes the remaining half alone, they will be able to complete the job in 20 days. How long will B alone take to do the job if A is more efficient than B?

A] 20 days B] 40 days C] 36 days D] 30 days

CHAPTER – 2 CHAIN RULE

In order to understand the concept of chain rule first we should recollect the fundamentals on variation (direct and inverse) for example

- If the work increases the number of men required to complete the work in same number of days increases proportionately and vice versa and hence directly proportional.
- If the work remaining constant men and days are inversely proportional i.e. if the number of men increases, the number of days required to complete the same work decreases and vice versa and hence inversely proportional.

In general we can use a formula in chain rule i.e.

If M_1 no. of men can complete a work in D_1 days and M_2 no. of men can complete a work in D_2 days then

$$M_1 \times D_1 = M_2 \times D_2$$

If M_1 no. of men can complete a work in D_1 days working H_1 hours per day and M_2 no. of men can complete a work in D_2 days working H_2 hours per day then

$$M_1 \times D_1 \times H_1 = M_2 \times D_2 \times H_2$$

If M_1 no. of men can complete a work W_1 in D_1 days working H_1 hours per day and M_2 no. of men can complete a work W_2 in D_2 days working H_2 hours per day then

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

Now we will clear the above concepts with the help of some examples.

Ex1. 36 men can complete a piece of work in 18 days. In how many days will 27 men complete the same work ?

Sol : Less Men, means more Days {Indirect Proportion}
Let the number of days be x
then,

27 : 36 :: 18 : x

[Please pay attention, we have written 27 : 36 rather than 36 : 27, in indirect proportion, if you get it then chain rule is clear to you :)]

$$x = \frac{36 \times 18}{27}$$

$$x = 24$$

So 24 days will be required to get work done by 27 men.

Ex2. 39 persons can repair a road in 12 days, working 5 hours a day. In how many days will 30 persons, working 6 hours a day, complete the work?

Sol :
Let the required number of days be x.

Less persons, More days (Indirect Proportion)

More working hours per day, Less days (Indirect Proportion)

$$\left.\begin{matrix} person & 30:39 \\ working\ hours/day & 6:5 \end{matrix}\right\} :: 12 : x$$

$$30 \times 6 \times x = 39 \times 5 \times 12$$

$$\Rightarrow x = \frac{39 \times 5 \times 12}{30 \times 6}$$

$$\Rightarrow x = 13$$

Ex3. An industrial loom weaves 0.128 meters of cloth every second. Approximately, how many seconds will it take for the loom to weave 25 meter of cloth ?

Let the time required by x seconds.
Then, More cloth means More time (Direct Proportion)
So,

$$0.128 : 1 :: 25 : x \Rightarrow x = \frac{25 \times 1}{0.128}$$

$$\Rightarrow x = 195.31$$

So time will be approx 195 seconds

Ex4. A fort had provision of food for 150 men for 45 days. After 10 days, 25 men left the fort. The number of days for which the remaining food will last, is:

Sol :

After 10 days : 150 men had food for 35 days.

Suppose 125 men had food for x days.

Now, Less men, More days (Indirect Proportion)

$\therefore$ 125 : 150 :: 35 : x $\Leftrightarrow$ 125 x x = 150 x 35

$$\Rightarrow x = \frac{150 \times 35}{125}$$

$$\Rightarrow x = 42.$$

Ex5. If 18 bindres bind 900 books in 10 days , How many binders will be required to bind 660 books in 12 days?

Sol:

Let the required no of binders be X.

Less books , Less binders (Direct Proportion)

More days, Less binders (Indirect proportion)

$$\left.\begin{matrix} Books & 900:600 \\ Days & 12:10 \end{matrix}\right\} ::18:x$$

$$\therefore (900 \times 12 \times x) = (600 \times 10 \times 18) \Leftrightarrow x = 600 \times 10 \times 18 \Leftrightarrow$$

$$x = \frac{600 \times 10 \times 18}{900 \times 12} = 11$$

Ex6. A contractor undertakes to do a piece of work in 40 days. He engages 100 men at the beginning and 100 more after 35 days and completes the work in stipulated time. If he had not engaged the additional men, how many days behind schedule would it be finished?

$[(100 \times 35) + (100 \times 35) + (200 \times 5)]$ men can finish the work in 1 day

$\therefore$ 4500 men can finish the work in 1 day. 100 men can finish it in $\frac{4500}{100}$ = 45 days.

This is 5 days behind Schedule

All the above examples can also be solved by using formula

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

The values which are in numerator are those who have indirect proportion with the unknown value and those who have direct proportion with unknown is kept in denominator.

[LEVEL – BEGINNER]

1. If 10 men can reap a field in 8 days, then 8 men will reap the same field in?

   A] 8days B] 10days C] 11days D] 12days

2. The price of 438 oranges is Rs. 1384.08. What will be the approximate price of 8 dozens of oranges?

   A] Rs 304.5 B] Rs 303.36 C] Rs 303.5 D] Rs 304.75

3. 3 pumps, working 8 hours a day, can empty a tank in 2 days. How many hours a day must 4 pumps work to empty the tank in 1 day?

   A] 8hrs B] 10hrs C] 11hrs D] 12hrs

4. A wheel rotates 10 times every minute and moves 20 cm during each rotation. How many cms does the wheel move in 1 hour?

   A] 12000 B] 24000 C] 11000 D] None

5. If 16 men working 7 hours day can plough a field in 42 days, in how many days will 14 men working 12 hours a clay plough the same field?

   A] 24days B] 30days C] 28days D] None

6. If 18 persons can build a wall 140 m long in 42 days, the number of days that 30 persons will take to complete a similar wall 100 m long, is?

   A] 18days B] 10days C] 11days D] 12days

7. Running at the same constant rate, 6 identical machines can produce a total of 270 pens per minute. At this rate, how many pens could 10 such machines produce in 4 minutes?

   A] 1800 B] 1000 C] 900 D] 1200

8. If 4 spiders make 4 webs in 4 days, then 1 spider will make 1 web in how many days?

   A] 8days B] 16days C] 4days D] 1/4days

9. A wheel that has 3 cogs is meshed with a larger wheel of 7 cogs. When the smaller wheel has made 21 revolutions, then the number of revolutions made by the larger wheel is:

   A] 8 B] 10 C] 11 D] 9

10. In a dairy farm, 40 cows eat 40 bags of husk in 40 days. In how many days one cow will eat one bag of husk?

    A] 1days B] 160days C] 80days D] 40days

11. If 5 men or 9 women can do a piece of work in 19 days. In how many days will 3 men and 6 women do the same work?

    A] 12 B] 15 C] 18 D] 21

12. A rope make 70 rounds of the circumference of a cylinder whose radius of the base is 14 cm. how many times can it go round a cylinder with radius 20 cm?

    A] 40 B] 49 C] 100 D] None

13. A fort had a provision of food for 150 men for 45 days. After 10 days, 25 men left. The number of days for which the remaining food will last?

    A] $29\frac{1}{5}$ B] $37\frac{1}{4}$ C] 42 D] 54

14. If 8 men can reap 80 hectares in 24 days, how many hectares will 36 men reap in 30 days?

    A] 350 B] 400 C] 425 D] 450

15. On a scale of map, 0.6 cm represents 6.6 km. if the distance between two points is 80.5 cm, the actual distance between them

    A] 9 km B] 72.5 km C] 190.75 km D] 885.5 km

16. If 5 men or 15women can do a piece of work in 12 days. In how many days will 3 men and 6 women do the same work?

A] 14 B] 15 C] 18 D] None

17. Find the number of days required by z number of workers, working z hours a day to complete z units of work, if x workers, working x hours a day complete x units of work in x days.

A] x/z^2days B] z/x^2days C] x^2/z days D] None

18. If 80 men can reap 80 hectares in 20 days, how many hectares will 16 men reap in 30 days?

A] 24 B] 40 C] 42 D] 45

19. If 5 men or 15women can do a piece of work in 12 days. In how many days will 3 men and 6 women will do the double work?

A] 24 B] 40 C] 12 D] 6

20. If a tower of height 190 m have a shadow of 10 m. How long is a pole if its shadow is 19 m?

A] 361 B] 100 C] 425 D] 190

[LEVEL – EXPERT]

1. 15 men take 21 days of 8 hours each to do a piece of work. How many days of 6 hours each would 21 women take, if 3 women do as much work as 2 men?

   A] 30days B] 40days C] 41days D] None

2. If 80 lamps can be lighted 5 hours per day for 10 days for Rs. 21.25,then the number of lamps which can be lighted 4 hours daily for 30days for Rs. 76.50, is?

   A] 130 B] 120 C] 140 D] 160

3. A contractor undertook to do a certain piece of work in 6 days. He employed certain number of men, but 4 of them being absent from the very first day, the rest could finish the work in 10 days. The number of men originally employed were:

   A] 9 B] 10 C] 11 D] 12

4. If 9 engines consume 24 metric tonnes of coal, when each is working 8 hours a day, how much coal will be required for 8 engines, each running 13 hours a day, it is being given that 3 engines of former type consume as much as 4 engines of latter type?

   A] 25 tons B] 36 tons C] 26 tons D] 28 tons

5. A building is to be completed in 48 days. To meet the deadline 54 men were employed and were made to work for 10 hours a day. After 30 days 5/9th of the work was completed. How many more workers should be employed to meet the deadline if each workers are now made to work 8 hours a day?

   A] 90 B] 54 C] 48 D] 36

6. In a camp, there is a meal for 90 men or 180 children. If 150 children have taken the meal, how many men will be catered to with the remaining meal?

   A] 10 B] 15 C] 18 D] 12

7. A contractor undertook to do a certain piece of work in 9 days. He employed certain number of men, but 6 of them being absent from the very first day, the rest could finish the work in 15 days. The number of men originally employed were:

   A] 15 B] 9 C] 44 D] 12

8. 12 men and 18 boys, working 9 hours a day, can do a piece of work in 60 days. If a man works equal to 2 boys, then how many boys will be required to help 21 men to do twice the work in 40 days, working 7 hours a day ?

   A] 60 B] 110 C] 120 D] None

9. If 3 men or 6 boys can do a piece of work in 10 days, working 7 hours a day; how many days will it take to compete a piece of work twice as large with 6 men and 2 boys working together for 8 hours a day ?

   A] 15days B] 15/2days C] 13/2days D] None

10. A contractor undertakes to do a piece of work in 40 days. He engages 100 men at the beginning and 100 more after 35 days and completes the work in stipulated time. If he had not engaged the additional men, how many days behind schedule would it be finished?

    A] 3days B] 5days C] 6 days D] 9days

11. A contractor employed 30 men to do a piece of work in 38 days. After 25 days, he employed 5 men more and the work was finished one day earlier. How many days he would have been -behind, if he had not employed additional men?

    A] 1days B] 5/4days C] 7/4 days D] 3/2days

12. Running at the same constant rate, 6 identical machines can produce a total of 270 bottles per minute. At this rate, how many bottles could 10 such machines produce in 4 minutes?

A] 648 B]1800 C] 2700 D] 10800

13. Some persons can do a piece of work in 12 days. Two times the number of such persons will do half of that work in:

A] 3days B] 9days C] 12days D] 2days

14. A certain number of men can finish a piece of work in 100 days. If, there were 10 men less, it would take 10 days more for the work to be finished. How many men were there originally?

A] 75 B] 82 C] 100 D] 110

15. If a certain number of workmen can do a piece of work in 25 hours, in how many hours will another set of an equal number of men, do a piece of work, twice as great, supposing that 2 men of the first set can do as much work in an hour, as 3 men of the second set do in an hour?

A] 70 B] 60 C] 30 D] 75

16. A contract is to be completed in 46 days and 117 men were set to work, each working 8 hours a day. After 33 days, 4/7 of the work is completed. How many additional men may be employed so that the work may be completed in time, each man now working 9 hours a day?

A] 80 B] 100 C] 81 D] 120

17. 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 can complete, double of the earlier work in?

A] 12days B] 20days C] 24days D] 25days

18. Assume that 20 cows and 40 goats can be kept for 10 days for Rs.460. If the cost of keeping 5 goats is the same as the cost of keeping 1 cow, what will be the cost for keeping 50 cows and 30 goats for 12 days?

A] Rs.1104 B] Rs.1000 C] Rs.934 D] Rs.1210

19. If 5 men or 10 women or 20 children can do a piece of work in 12 days. In how many days will 3 men and 6 women and 80 children can do the same work?

A] 30/13 B] 12 C] 5 D] None

20. If daily wages of a man is double to that of a woman, how many men should work for 25 days to earn Rs.14400? Given that wages for 40 women for 30 days are Rs.21600.

A] 12 B] 14 C] 16 D] 18

21. 20 men complete 1/3 of a piece of work in 20 days. How many more men should be employed to finish the rest of the work in 25 more days?

A] 10 B] 12 C] 15 D] 20

22. If a certain number of workmen can do a piece of work in 25 hours, in how many hours will another set of an equal number of men, do a piece of work, twice as great, supposing that 2 men of the first set can do as much work in an hour as 3 men of second set do in an hour?

A] 60 B] 75 C] 90 D] 105

23. 5 Men working 8 hours a day can completely build a wall of length 20 m, breadth ¼ m and height 6 m in 3 days. How many days will 8 men working 6 hours a day require to build a wall of length 120m, breadth ½ m and height 4m.

A] 10 days B] 20 days C] 21 days D] 24 days

24. A ship can be unloaded in 20 days. A contractor appointed 280 persons. After 6 days only $1/4^{th}$ of the work was done. Find the number of additional men required to finish the job on time.

A] 80 men B] 90 men C] 70 men D] 75 men

25. 12 men & 18 boys, working $7\frac{1}{2}$ hours a day, can do a piece of work in 60 days. If a man work equal to 2 boys, then how many boys will be required to help 21 men to do twice the work in 50 days, working 9 hours a day?

A] 30 B] 42 C] 48 D] 90

26. 2 men & 7 boys can do a piece of work in 14 days; 3 men & 8 boys can do the same in 11 days. Then 8 men & 6 boys can do three times the amount of this work in:

A] 18 days B] 21 days C] 24 days D] 30 days

27. 49 pumps can empty a reservoir in $6\frac{1}{2}$ days, working 8 hours a day. If 196 pumps are used for 5 hours each day, then the same work will be completed in

A] 2 days B] $2\frac{1}{2}$ days C] $2\frac{3}{5}$ days D] 3 days

28. A garrison of 3300 men had provisions for 32 days, when given at the rate of 850 gms per head. At the end of 7 days, a reinforcement arrives & it was found that ht provisions will last 17 days more, when given at the rate of 825 gms per head. What is the strength of reinforcement?

A] 1200 B] 1500 C] 1700 D] None

29. The cost of 16 packets of salt, each weighting 900 grams is Rs. 28. What will be the cost of 27 packets, if each packet weight 1 kg?

A] Rs. 52.5 B] Rs. 56 C] Rs. 58.5 D] Rs. 64.75

30. A certain number of person can dig a trench 10m long, 8m broad & 5m deep in 10 days. The twice number of person can dig another trench 20m broad, 2m deep in 30 days. The length of second trench is

A] 20 B] 40 C] 60 D] 80