L8 : Time and Work

1-Tut : **Days Taken By A**

A can do a piece of work in 12 days and B in 15 days. They work together for 5 days and then B left. The days taken by A to finish the remaining work is

Options

This problem has only one correct answer

3
5
10
12

Correct Answer : A

Solution Description

Let the total work be LCM of 12 & 15= 180.

Efficiency of A= 180/12= 15

Efficiency of B= 180/15=12

Total work done by A & B in first five days= (15+ 12)*5= 135.

Time taken by A to finish the remaining work= (180-135)/15=45/15=3 days. Hence, option (1) is correct.

2-Tut : **B Alone Days**

A and B can do a piece of work in 20 days. A alone can do it in 24 days then in how many days can B alone do it?

Options

This problem has only one correct answer

120
60
100
30

Correct Answer : A

Solution Description

(A+B)'s 1 day work=(1/20),

A's 1 day work=(1/24)

so B's 1 day work= (1/20)-(1/24)=(1/120).

Hence no. of days=120.

Hence, option (a) is correct.

3-Tut : Total Time Together

A, B and C can do a work separately in 16, 32 and 48 days respectively. Total time taken by A, B and C together to finish the job?

Options

This problem has only one correct answer

10.67 days
9.33 days
12.33 days
8.72 days

Correct Answer : D

Solution Description

Let the total work be LCM of (16, 32, 48)= 96

Efficiency of A= 96/16= 6

Efficiency of B= 96/32= 3

Efficiency of C= 96/48= 2

Total efficiency= 6+ 3+ 2= 11

Total time taken by A, B and C together to complete the work=96/11= 8.72 days.

4-Tut : Tank Empty Time

Two pipes can fill a tank with water in 15 and 12 hours respectively and a third pipe can empty it in 4 hours. If the pipes be opened in order at 8, 9 and 11 a.m. respectively, the tank will be emptied at

Options

This problem has only one correct answer

11 : 40 am
12 : 40 pm
1:40 pm
2 : 40 pm

Correct Answer : D

Solution Description

Let the capacity of the tank = LCM of (15, 12, 4)= 60 liters.

1st pipe= 60/15= 4 liters per minute.

2nd pipe= 60/12= 5 liters per minute.

3rd pipe= 60/4= 15 liters per minute.

At 11 A.M.Tank filled by 3×4 +2×5=22 liters.

At 11 A.M. all the three pipes are open 4+ 5- 15= -6 liters.

Tank will be emptied 22/6= 3 hours 40 minutes after 11 AM.

Hence, tank will be emptied by 2: 40 PM. Hence, option (4) is correct.

5-Tut : People Efficiency
Send Feedback

If 10 people can do a job in 20 days, then 20 people with twice the efficiency can do the same job in

Options
This problem has only one correct answer

5 days
10 days
20 days
40 days

Correct Answer : A

Solution Description

Number of people and efficiency both got twice hence required number of days= 20/(2×2)=5 days. Hence, option 1 is correct.

6-Tut : Days To Complete Work
Send Feedback

If 72 men can build a wall of 280 m length in 21 days, how many men could take 18 days to build a similar type of wall of length 100 m?

Options
This problem has only one correct answer

30
10
18
28

Correct Answer : A

Solution Description

72×21 men-days= 280 m

Let 'x' men took 18 days to build the similar type of wall of length 100m.

72×21 men-days= 280 m

18×4×21men-days=280

18×30 men-days=100 m

Hence the required answer must be 30 men. Hence, option (1) is correct.

7-Tut : Days To Complete Work

12 workers can do a piece of work in 300 days. At the end of 150 days, the number of workers employed is doubled. So in how many more days will the work be completed?

Options

This problem has only one correct answer

50 days
75 days
60 days
80 days

Correct Answer : B

Solution Description

If x is the no. of more days taken to complete the work then according to the concept:

12×300-12×150=24x

By solving we get x=75 days.

8-Tut : Men To Be Employed

Seventy-five men are employed to lay down a railway line in 3 months. Due to certain emergency conditions, the work was to be finished in 18 days. How many more men should be employed to complete the work in the desired time?

Options

This problem has only one correct answer

300
325
350
r375

Correct Answer : A

Solution Description

Total work= 75×3 men-months or 75 x 90 men days
Let 'x' more men employed to finish the work in 18 days.
75×90=(75+x)*18
On solving, we get: x= 300. Hence, option (1) is correct.

9-Tut : **Same Piece Of Work**

If 4 men or 8 women can do a piece of work in 15 days, in how many days can 6 men and 12women do the same piece of work ?

Options

This problem has only one correct answer

20 days
5 days
15 days
30 days

Correct Answer : B

Solution Description

Let the efficiencies of 1 man and 1 woman be 'm' and 'w'.

4m=8w

m= 2w OR w= m/2.

Total work= 4m×15=60m.

Let 6 men and 12 women did the same job in 'x' days.

(6m+12w)*x=60m
(6m+6m)*x=60m
x=5 days.

Hence, option 2 is correct.

10-Tut : **Finish Work**

3 men and 4 boys can complete a piece of work in 12 days. 4 men and 3 boys can do the same work in 10 days. Then 2 men and 3 boys can finish the work in number of days is

Options

This problem has only one correct answer

35/2 days
60/11 days
8 days
22 days

Correct Answer : A

Solution Description

If the efficiencies of 1 man and 1 boy be m and b respectively then
According to the question: 12(3 m + 4 b)= 10(4 m+ 3 b)

      36 m + 48 b = 40 m + 30 b
      4 m = 18 b
      2 m = 9 b
    ∴ 4 m + 3 b = 18b+ 3b= 21 b
      Total work= 210b.
   2men and 3 boys= 2m+3b=9b+3b=12b
      21b * 10 = 12b * d

    d= (21×10)/12=35/2

11-Ass : Men Required

Send Feedback

If 10 men complete a piece of work in 30 days, how many men are required to complete the same in 25 days?

Options

This problem has only one correct answer

35
18
12
20

Correct Answer : C

Solution Description

No. of men required is inversely proportional to the no. of days required.

Hence, M1/ M2= D2/D1 where M1=10, M2=? ,D1=30 , D2=25.

Now, we get M2=12 by putting the values.

12-Ass : Shubham And Number Of Days

Send Feedback

Shubham can do 25% of work in 10 days. How many days will he take to complete a work equal to 5 times this work?

Options

This problem has only one correct answer

250 days
200 days
300 days
350 days

Correct Answer : B

Solution Description

Work done by Shubham in 10 days= W/4 if W is total work.

Hence, he completes the work in 40 days so does 5 times of that work in 40 X 5=200 days.

13-Ass : Days To Complete Work

10 men can dig a hole in 18 days. After 6 days, 5 more men joined. After how many days the remaining work would be completed?

Options

This problem has only one correct answer

16 days
13 days
8 days
12 days

Correct Answer : C

Solution Description

Solution: total work= 10 x 18= 180 men-days

After 6 days remaining work= 180- 60= 120 men-days

Required time to complete the work= 120/15=8 days.

14-Ass : Number Of Men To Finish Work

18 men working 8 hours a day can complete a work in 5 days. Working at a rate of 6 hours a day, the number of men required to finish the work in 10 days is

Options

This problem has only one correct answer

12
10
15
20

Correct Answer : A

Solution Description

Total work= 18×8×5=720 =6×10×x=60x, where x is the no. Of men required.

On equating, we get x=12.