

# Time & Work

# Questions & Solution



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## Time & Work Questions With Solution

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A completes 40% of a task in 10 days and then takes the help of B and C. B is 50% as efficient as A is and C is 50% as efficient as B is. In how many more days will they complete the work?

- A)  $13 \frac{1}{3}$
- B)  $8 \frac{4}{7}$
- C)  $10 \frac{2}{3}$
- D) 9
- E) None

**View Answer**

**Option B**

**Solution:**

A completes 40% of work in 10 days.

Given, A:B is 2:1 and B:C is 2:1

Now A:B:C=4:2:1

A's work  $4 \times 10(\text{days}) = 40\%$

Remaining  $60\% = \frac{60}{(4+2+1)} \times 7 = 8 \frac{4}{7}$  days.

• Jeni can do a job in 30 days, Nove in 45 days and Joel in 60 days. If Jeni is helped by Nove and Joel every 3rd day, how long will it take for them to complete the job?

- A)  $7 \frac{1}{5}$
- B) 8
- C)  $9 \frac{3}{4}$
- D) 10
- E) None

**View Answer**

**Option A**

**Solution:**

Jeni 30.....6

N 45            LCM180.....4

Joel 60 .....3

1st two days =  $6 \times 2 = 12$  unit work completed.

3rd day  $(6+4+3) = 13$  unit

For 3 days

$12+13=25$  unit completed

$3 \times 7 = 25 \times 7$

$21 = 175$

Remaining 5 unit done by Jeni  
Then  $5/6$  work  
Then total  $21 \frac{5}{6}$  days.

- Ram and Ravi can do a job together in 8 days. Ram is  $1\frac{1}{8}$  times as efficient as Ravi. The same job can be done by Ravi alone in  
A) 21  
B) 25  
C) 19  
D) 16  
E) None

View Answer

**Option C**

**Solution:**

Ram : Ravi = 8 : 11 (Efficiency)

$(11+8) = 19$  days (both completed in 8 days)

Then Ravi 8 days = (Efficiency and days are reciprocal)  $19 \times \frac{8}{8} = 19$  days.

- The work done by a woman in 8 hours is equal to the work done by a man in 6 hours and by a boy in 12 hours. If working 6 hours per day 9 men can complete a work in 6 days then in how many days can 12 men, 12 women and 12 boys together finish the same work working 8 hours per day?  
A)  $3\frac{1}{2}$   
B)  $5\frac{1}{3}$   
C) 3  
D) 6  
E) None

View Answer

**Option A**

**Solution:**

$8W = 6M = 12B$

Then  $1M = 2B$ ,  $1W = \frac{3}{2}B$ ,  $1W = \frac{3}{4}M$

Then  $12M + 12W + 12B = 12M + 9M + 6M = 27M$

Given 9 men work 6 hrs /day and complete in 6 days

$9 \times 6 \times 6 = 27 \times 8 \times x$

$\implies x = 3\frac{1}{2}$ .

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

- A) 35
- B) 15
- C) 22
- D) 18
- E) None

**View Answer**

**Option D**

**Solution:**

$$2(M+N+O)'s\ 1\ day\ work = (1/30+1/24+1/20)=1/8$$

$$\Rightarrow(M+N+O)'s\ 1\ day's\ work = 1/16$$

$$\text{work done by M, N and O in 10 days} = 10/16=5/8$$

$$\text{Remaining work} = (1 - 5/8)$$

$$M's\ 1\ day's\ work = (1/16 - 1/24)=1/48$$

Now,  $1/48$  work is done by M in 1 day.

So,  $3/8$  work will be done by M in  $48 \times 3/8 = 18$  days

• 6 men can do a piece of work in 2 hours, which 3 women could do in 3 hours, or 5 children in 4 hours. How long would 1 man, 1 woman and 1 child together take to do the work?

- A) 180/71
- B) 135/33
- C) 140/13
- D) 195/14
- E) None

**View Answer**

**Option B**

**Solution:**

$$1\text{men work} = 6 \times 2 = 12\text{hrs}$$

$$1\text{women work} = 3 \times 3 = 9\text{hrs}$$

$$1\text{children work} = 5 \times 4 = 20\text{hrs}$$

$$\text{Required work} = 12 \times 9 \times 20 / (12 \times 9) + (9 \times 20) + (20 \times 12)$$

$$= 2160 / 528 = 135 / 33\text{hrs.}$$

• A, B and C can all together do piece of work in 20 days, in which B takes twice as long as A and C together do the work and C takes twice as long as A and B together take to do the work. In how many days B can alone do the work?

- A) 40
- B) 35
- C) 60
- D) 45
- E) None

View Answer

**Option C**

**Solution:**

(A+C) in x days so B completes in 2x days

then  $(1/x) + (1/2x) = 1/20$

solve,  $x = 30$

so B  $2x = 60$  days

• A typing work is done by three person P, Q and R. P alone takes 20 hours to type a single booklet but Q and R working together takes 5 hours, for the completion of the same booklet. If all of them worked together and completed 15 booklets, then how many hours have they worked?

A) 45hrs

B) 60hrs

C) 38hrs

D) 55hrs

E) None

View Answer

**Option B**

**Solution:**

$1/P = 1/20$

$1/P + 1/Q + 1/R = 1/20 + 1/5 = 1/4$

In 4 hours, working together, they will complete 1 booklets.

Thus, 15 booklets completed in 60hrs.

• Efficiency of A is 25% more then B and B takes 25 days to complete a piece of work. A started a work alone and then B joined her 5 days before actual completion of the work. For how many days A worked alone?

A) 11

B) 9

C) 15

D) 12

E) None

View Answer

**Option A**

**Solution:**

Efficiency (A : B) = 5 : 4

Number of days(A : B) =  $4x : 5x = 4x : 25$

∴ Number of days required by A to finish the work alone =  $4x$   
 $= 4 \times 5 = 20$ .

A and B work together for last 5 days =  $5 \times 9 = 45\%$

Efficiency of A =  $5\%$  and B's efficiency =  $4\%$

∴ No. of days taken by A to complete  $55\%$  work =  $55/5 = 11$ days

• A project manager hired 15 men to complete a project in 40 days. However, after 30 days, he realized that only  $1/2$  of the work is completed. How many more men does he need to hire to complete the project on time?

- A) 15
- B) 30
- C) 20
- D) 25
- E) None

**View Answer**

**Option A**

**Solution:**

15Men complete a work in 40days.

$15 \times 40/1 = (40-30)10 \times x/(1/2) = x = 30$ Men

Men required =  $30 - 15 = 15$ Men.

1. 20 Men can complete a work in 12 days and 24 Boys can complete same work in 20 days. 16 men and 8 boys started working and worked for 12 days. How many more days are needed to complete the work?
  - A) 4 days
  - B) 7 days
  - C) 9 days
  - D) 2 days
  - E) No more days needed.

**View Answer**

**Option E**

**Solution:**

$20M \times 12 \text{ days} = 24B \times 20 \text{ days}$

then  $1M = 2B$

Now  $16M + 8B \Rightarrow 16M + 4M = 12 \text{ days}$  ie  $20M = 12 \text{ days}$ .

So no more days needed to complete the work.

2. A and B each working alone can do a work in 12 and 36 days respectively. They started the work together but A left after sometime and B finished the remaining work in 4 days. After how many days from the start did A leave?

A) 10 days

- B) 8 days
- C) 12 days
- D) 3 days
- E) None

**View Answer**

**Option B**

**Solution:**

A 12 3unit(A's work)

B 36 1unit(B's work) Both Lcm 36 (whole work)

B work 1 unit per day then for 4 days 4unit.

remaining  $36-4=32$  unit left that done by both A and B

Both work unit  $(3+1) 4 \implies 32/4 \implies 8$ days.

3. A man 'A' can do a piece of work in 10 days, man 'B' can do the same piece of work in 12 days while man 'C' can do it in 15 days. They started work together but after 2 days 'A' left the work and the remaining work was completed by 'B' and 'C' together. Find in how many days will the work be completed.

- A) 5 days
- B) 7 days
- C)  $2 \frac{1}{6}$  days
- D)  $3 \frac{1}{3}$  days
- E) None of these

**View Answer**

**Option D**

**Solution:**

A.....10                      6unit

B.....12    Lcm=60      5unit

C.....15                      4unit

Work of all 3 per day is 15 units  $(6+5+4)$

All 3 worked for 2 days. So 2 days work is  $2*15=30$ units.

Remaining  $(60-30)=30$ unit

That work done by B and C their per day work unit  $(5+4)=9$ unit

Remaining work done by B and C is  $30/9=3 \frac{1}{3}$  days.

4. An empty tank whose capacity is 50 litres. There is an inlet pipe which fills at 7 L/min and there is an outlet pipe which empties at 6L/min. Both the pipes function alternately for 1 minute. The inlet pipe is the first one to function, how much time will it take for the tank to be filled up to its capacity?

- A) 95
- B) 100
- C) 87
- D) 110
- E) none



**View Answer****Option C****Solution:**

Capacity 50 litres

1st Minute 7l filled (through inlet pipe)

2nd minute 6l emptied (through outlet pipe)

In 2 minutes (7litres - 6 litres =) 1l is filled

It takes 2 minutes to fill 1l then 84 minutes to fill 42 litres.

in 85th min –  $42+7 = 49$ in 86th –  $49-6 = 43$ in 87th –  $43+7 = 50$ 

5. There are three pipes, A, B and C, attached to container. A and B can fill the container alone in 20 and 30 mins, respectively whereas C can empty the container alone in 45 mins. The three pipes are kept opened alone for one minute each in the the order A, B and C. The same order is followed subsequently. In how many minutes will the reservoir be full?

- A) 25 min  
B) 35 min  
C) 20 min  
D) 47 min  
E) None of these

**View Answer****Option D****Solution:**

A.....20 9unit (180/20)

B.....30 180 (LCM) 6unit

C.....45 4unit

1st Minute =&gt; A is opened =&gt; fills 9 L

2nd Minute =&gt; B is opened =&gt;fills another 6 L

3rd Minute =&gt; C is opened =&gt; empties 4 L

Hence every 3 minutes =>  $(9 + 6 - 4 =) 11$  litres are filled into the container.So in 45 minutes  $(11 \times 15 =)$  165 litres are filled.

In the 46th minute A is opened and it fills 9 litres. In the 47th minute B is opened and it fills 6 litres.

Hence the container will be full in 47 minutes.

6. Efficiency of A is 50% more than B and B takes 21 days to complete a piece of work. A started the work alone and then B joined her 5 days before actual completion of the work. For how many days A worked alone?

- A) 6 days  
B)  $4 \frac{1}{2}$  days  
C)  $5 \frac{2}{3}$  days  
D) 7 days

E) None

**View Answer**

**Option C**

**Solution:**

Efficiency (A : B) = 150:100 = 3 : 2 then days 2:3

B takes 21 days to do the work. Then A takes 14 days to do the work.

(3 == 21

2 ? == 14 days.)

Now A.....14 3unit

. B.....21 Lcm 42 2unit

then B joined with A and worked for 5days ==>5\*5(3+2) = 25 unit

remaining (42-25)=17unit

then A did that 17 unit alone is  $17/3=5\frac{2}{3}$  days.

7. M can do a piece of work in 10 days working 10 hours a day. The work is started by M and on the second day one man whose capacity to do the work is twice that of M, joined. On the third day another man whose capacity is thrice that of M, joined and the process continues till the work is completed. In how many days will the work be completed, if everyone works for five hours a day?

A) 4

B) 6

C) 7

D) 3

E) None

**View Answer**

**Option A**

**Solution:**

M total work  $10 \times 10 = 100$

1st day = 5hrs

2nd day = 10+5=15

3rd day = 15+10+5=30

4th day = 20+15+10+5=50

Total (5+15+30+50) = 100

So 4th day they completed the work.

8. A tent can be built by a certain number of workers in 20 days. But it requires less than 20 workers to build it in 30 days. How many workers will build it in 50 days?

A) 30

B) 24

C) 50

D) 18

E) None

**View Answer****Option B****Solution:**

Let, x workers can do the work in 20 days.

then no of workers require to finish it in 30 days is  $20x / 30$ 

$$20x/30 = (x - 20)$$

$$10x = 600$$

$$x = 60$$

So, No of workers require to finished it in 50 days =  $(60 * 20) / 50 = 24$  workers.

9. A can do a particular work in 6 days . B can do the same work in 8 days. A and B signed to do it for Rs. 4000. They completed the work in 3 days with the help of C. How much is to be paid to C?

- A) 380
- B) 600
- C) 500
- D) 450
- E) None

**View Answer****Option C****Solution:**

$$A = 6$$

$$B = 8$$

|       | A            | B            | C                       | A+B+C                    |        |
|-------|--------------|--------------|-------------------------|--------------------------|--------|
| Days  | 6            | 8            | 24                      | 3                        |        |
| Units | $(6*4)$<br>4 | $(8*3)$<br>3 | $(24*1)$<br>[8-(4+3)] 1 | $(8*3)$<br>8(total unit) | LCM 24 |

So C work 24 days to complete a work.

Then the ratio  $1/6 : 1/8 : 1/24 = 4 : 3 : 1$ 

Now total amount Rs4000 ie (ratio 4+3+1) 8 ==4000

$$1(\text{C's ratio})=? 4000/8*1=500\text{Rs}$$

Amount paid to C is Rs 500.

10. Ram and Ravi can separately do a piece of work in 20 and 15 days respectively. They worked together for 6 days, after which Ravi was replaced by Rohit. If the work was finished in next 4 days, then the number of days in which Rohit alone could do the work will be :

- A) 40
- B) 42
- C) 45
- D) 50
- E) None

**View Answer**

**Option A****Solution:**

Ram and Ravi worked together

$$1/20 + 1/15 = (3+4)/60 = 7/60$$

they work for 6 days so  $7/60 * 6 = 7/10$

Remaining work  $3/10$  done by Ram and Rohit.

Ram and Rohit finished in 4 days so  $3/40$ .

$$\text{now } 3/40 - 1/20 = 1/40$$

1. A can do a work in 25 days which B alone can do in 20 days. A started the work and was joined by B after 10 days . Find the number of days taken in completing the work ?
- A)  $7\frac{1}{3}$  days  
 B)  $16\frac{2}{3}$  days  
 C)  $12\frac{1}{3}$  days  
 D)  $5\frac{1}{7}$  days  
 E)  $11\frac{1}{10}$  days

**View Answer****Option B****Solution:**

Total work = 100 units

A = 4 units/ work

A do for 10 days of work = 40

remaining = 60

A+ B = 9

remaining work completed in =  $60/9 = 6\frac{2}{3}$

B = 5 units/work

Total days in completing the work =  $10 + 6\frac{2}{3} = 16\frac{2}{3}$  days

2. 6 men of the first group do  $\frac{2}{3}$  of the work in  $\frac{1}{3}$  times compared to 4 men of the second group, find the respective ratio for one day of 2 men of the first group and 4 men of the second group?
- A) 3 : 4  
 B) 3 : 7  
 C) 2 : 3  
 D) 1 : 3  
 E) 2 : 5

**View Answer****Option C****Solution:**

$$6 M * \frac{3}{2} W * \frac{T}{3} = 4 m * W * T$$

$$\Rightarrow \frac{2M}{4m} = \frac{2}{3}$$

3. Aman is thrice as efficient as Bikash. Aman started the work and worked for 6 days then he is replaced by Bikash , he worked for 9 more days and they together finish 50% of the work. Find in how many days Bikash completed the work?
- A) 35 days

- B) 40 days
- C) 57 days
- D) 54 days
- E) 48 days

**View Answer**

**Option D**

**Solution:**

Aman : Bikash = 3 : 1

Total work = 27 work

Aman complete = 16 work/day

Bikash complete = 9 work /day

50% ===== 27

100% =====54

B alone take =  $54/1 = 54$  days

4. A, B and C can complete a piece of work in 10, 12 and 15 days resp. A left the work 5 days before the completion of the work B left two days after A had left the work. Find the number of days required to complete the work?

- A) 7 days
- B) 5 days
- C) 10 days
- D) 12 days
- E) 8 days

**View Answer**

**Option A**

**Solution:**

Total work = 60 units

A takes = 6 units/day

B takes = 5 units/day

C takes = 4 units/day

Now ,

$$(x-5)/10 + (x-3)/12 + x/15 = 1$$

$$\Rightarrow x = 7 \text{ days}$$

5. A can do a work in 12 days when he had worked for 3 days B joined him if they complete the work in 3 more days. In how many days can B alone finish the work.

- A) 2 days
- B) 5 days
- C) 4 days
- D) 6 days
- E) 3 days

**View Answer**

**Option D**

**Solution:**

A's 1 day's of work =  $3/12 = \frac{1}{4}$

Remaining work =  $1 - (1/4) = \frac{3}{4}$  days

$$(A+B) \text{ ————— } \left(\frac{3}{4}\right) \text{ ————— } 3 \text{ days}$$

$$(A+B) \text{ ————— } 1 \text{ ————— } 4 \text{ days}$$

(A+B) takes = 4 days to complete the work

A takes = 12 days to complete the work

total work = 12 units

B can complete the work in =  $12/2 = 6$  days

6. 6 women can complete a piece of work in 15 days . After 3 days from the start of the work , some of them left the work. If the remaining work was completed by the rest of the women in 20 days. How many women left after 3 days from the start of the work?

A)  $14/3$  days

B)  $15/4$  days

C)  $15/2$  days

D)  $16/3$  days

E)  $11/2$  days

**View Answer**

**Option B**

**Solution:**

Let the number of women left the work be x

6 women done the work in 3 days =  $3/6 = \frac{1}{2}$

remaining work =  $1 - \frac{1}{2} = \frac{1}{2}$

Now,

$$M_1 D_1/W_1 = M_2 D_2/W_2$$

$$\Rightarrow (6 * 15)/1 = \{(6-x)*20\}/(\frac{1}{2})$$

$$\Rightarrow x = 15/4 \text{ days}$$

7. A is thrice as good as B and it takes 30 days less than B for doing a job. How much time required to finish the work together.

A)  $21(1/3)$  days

B)  $23(1/2)$  days

C)  $22(1/2)$  days

D)  $20(1/4)$  days

E)  $22(1/3)$  days

**View Answer**

**Option C**

**Solution:**

A : B = 3 : 1 ( efficiency )

(A + B)'s day's work =  $(1/15) + (1/45) = 4/45$

Total time taken by both of them =  $45/4 = 11(1/4)$  days

8. 10 men , 6 women and 9 boys were given a project of doing 2000 designs of a building in 5 days. All of them designed on the first day. On the second day 2 women and 3 boys are absent. On the third day , 3 men and 5 boys are absent. If the ratio of the number of designs done by them is in the ratio 3 : 2 : 1 respectively. Then find the number of designs designed by them on the second day (approx.)?

A) 620

B) 600

C) 667

- D) 650  
E) 682

**View Answer**

**Option C**

**Solution:**

Let the ratio be  $3x : 2x : 1x$

Designs of building on the first day =  $10 * 3x + 6 * 2x + 9 * x = 51x$

On the second day =  $10 * 3x + 4 * 2x + 6 * x = 44x$

On the third day =  $7 * 3x + 6 * 2x + 4 * x = 37x$

Now,  $51x + 44x + 37x = 2000$

$\Rightarrow 132x = 2000$

Therefore,  $2000/132 * 44 = 666.66 = 667$  (approx.)

9. 9 children can complete a piece of work in 200 days. 18 men can complete the same work in 150 days and 12 women can complete the work in 180 days. In how many days can 10 children, 3 men and 12 women together complete the work?

- A)  $85\frac{1}{2}$  days  
B)  $80\frac{1}{2}$  days  
C)  $81\frac{1}{3}$  days  
D)  $81\frac{9}{11}$  days  
E)  $88\frac{1}{2}$  days

**View Answer**

**Option D**

**Solution:**

$9 * 200$  children =  $18 * 150$  men =  $12 * 180$  women

$\Rightarrow 1800$  children =  $2700$  men =  $2160$  women

$\Rightarrow 10$  children =  $15$  men =  $12$  women

Now,  $10$  children +  $3$  men +  $12$  women

=  $10$  children +  $2$  children +  $10$  children =  $22$  children

$\Rightarrow 22$  children can complete the work in =  $(200 * 9) / 22 = 81\frac{9}{11}$  days

10. A man gets Rs.620 for every day for his work. If he earns Rs.12400 in a month of 31 days. Find how many days did he work?

- A) 10 days  
B) 21 days  
C) 20 days  
D) 18 days  
E) 15 days

**View Answer**

**Option C**

**Solution:**

Number of days =  $12400 / 620 = 20$  days

1. A is thrice as good a workman as B and therefore able to finish a job in 48 days less than B working together, they can do it in how many days together?  
A) 13 days

- B) 15 days
- C) 18 days
- D) 12 days
- E) 116 days

**View Answer**

**Option C**

**Solution:**

. A:B

Efficiency=3:1

Time=1:3

Multiplying by 24 on both the sides ,

A's=24 days

B's=72 days

Therefore, 2 units =48 days

1 units =24 days

Total work=No. of days \*Efficiency

.  $72 \times 1$

. =72

One day work of A and B is  $3+1=4$  units

A and B will complete the work in  $=72/4=18$ days.

2. Three men –A ,B and C working together can do a job 6 hours less time than A did alone , 1 hour less time than B alone and half the time needed by C .In how many days will A finish the work alone ?

- A) 20/3 days
- B) 23/4 days
- C) 22/5 days
- D) 33/6 days
- E) 27/8 days

**View Answer**

**Option A**

**Solution:**

A+B+C      A      B      Cx hr.      x+6      x+1      2x Taking LCM = 2x

$(x+1)(x+6)$

Taking efficiency of A and B ;

$2x(x+1)(x+6)/(2x + 2x+2x+12x) = 2x/1$

$3x + 7x - 6 = 0$

$X = -3$ (ignore)

$X = 2/3$

A will finish its work in  $(x+6)=20/3$  days



3. A work is started by a man on the first day. Each subsequent day a new person joined the work and it is known that the total work will be completed on the 11th day. If from the starting day 6 men working on that work and no new men added later, in how many days the work got completed?

- A) 15 days
- B) 12 days
- C) 14 days
- D) 11 days
- E) None of these.

**View Answer**

**Option D**

**Solution:**

1 day work of a man is 1 unit. If a new person joined the work on second day, 2 units of work get completed. Similarly 3 units on 3rd day, 4 units on 4th day so on...

Then for all the eleven days the total work =  $1 + 2 + 3 + \dots + 11 = 66$  units (Use formula

$$N(N+1)/2)$$

Now 6 men /day work = 6 units/day.

They can complete 66 units of work in =

$$66/6$$

$$= 11 \text{ days}$$

4. Two men can complete a piece of work in 3 days while 3 women can complete the same work in 4 days and 4 children can complete the same work in 6 days. Then find in how many days 1 man, 1 woman and 2 children can complete the same work ?

- A) 4 days
- B) 3 days
- C) 5 days
- D) 2 days
- E) None of these.

**View Answer**

**Option B**

**Solution:**

$$2M * 3 = 3W * 4 = 4C * 6$$

$$\therefore 1M = 2W = 4C$$

$$\text{LCM} = 4$$

1 Man's efficiency = 4 units/day

2 Women's efficiency = 2 units/day

4 Children's efficiency = 1 unit/day

Total work =  $(2*4)*3 = 24$  days

$(1\text{man} + 1\text{woman} + 2\text{children}) = 4 + 2 + 2 = 8$

$(1\text{man} + 1\text{woman} + 2\text{children})$  complete the work =  $24/8 = 3$  days

5. 30 men are supposed to do a work in 38 days. After 25 days, 5 more men were employed on work for which the work is completed in 1 day before. If 5 more men were not worked then how many days took in delay?
- A) 1 day
  - B) 2 days
  - C) 3 days
  - D) 4 days
  - E) None of these.

**View Answer**

**Option A**

**Solution:**

$$30\text{Men} * 25 \text{ days} = 750$$

$$35 \text{ Men} * 12 \text{ Days} = 420$$

$$\text{Total} = 750 + 420 = 1170$$

$$\text{Now, } 1170 / 30 = 39 \text{ days}$$

1 day delay

6. A group of men decided to do a job in 4 days but 20 men dropped out everyday, the job was completed at the end of the 7th day. Find the men who are in the work initially?
- A) 155
  - B) 135
  - C) 120
  - D) 140
  - E) 160

**View Answer**

**Option D**

**Solution:**

$$\text{Total work} = M * 4 = 4M$$

$$M + (M+20) + \dots$$

$$7/2 [2M + 6(-20)] = 4M$$

$$M = 140$$

7. A printer A can print one thousand books in 15 hours, printer B can print the same number of books in 10 hours and printer C can print the same number of books in 12 hours. If all the printers are started to print the books at 8 A.M., After sometime printer A is closed at 9 A.M. and printer B and printer C remains working. Find at what time the

printing will be completed ?

- A)  $4\frac{3}{11}$  hours
- B)  $3\frac{1}{11}$  hours
- C)  $5\frac{1}{11}$  hours
- D)  $3\frac{5}{11}$  hours
- E) None of these.

**View Answer**

**Option C**

**Solution:**

Let printing completed in be T hours

Then A 's 1 hour work ,B's T hours work and C;s T hours work =Total work

$$\frac{1}{15} + \frac{T}{10} + \frac{T}{12} = 1$$

$$T = 5\frac{1}{11}$$

Hence ,the printing of books will be completed at  $5\frac{1}{11}$  hours

8. Ramesh and Ram can do a piece of work in 24 and 30 days respectively. They both started and worked for 6 days. Ram then leaves the work and another their friend Rohit joins the work and completed the remaining work with Ramesh in 11 days . Find how many days are taken by Rohit alone to finish the work?

- A) 110 days
- B) 132 days
- C) 150 days
- D) 120 days
- E) None of these.

**View Answer**

**Option D**

**Solution:**

$$\left(\frac{1}{24} + \frac{1}{30}\right) * 6 + \left(\frac{1}{24} + \frac{1}{\text{Rohit}}\right) * 11 = 1$$

Therefore ,Rohit takes 120 days to finish the work.

9. A woman has her three daughters. First and second can take 24 and 30 days resp. to complete a work .In how many days third one takes to complete the work. If woman can complete the whole work alone in  $3\frac{3}{11}$  days .The efficiency of woman is double than her three daughters.

- A) 22 days
- B) 12 days
- C) 13 days
- D) 21 days
- E) 19 days

**View Answer**

**Option B**

**Solution:**

LCM = 72 (if we are taking woman and her two daughters )

Here it is given

Woman Three daughters

Time taken = 1 : 2

Efficiency= 2 : 1 Three daughters, let P +Q+R=11

$3+2+R=11$

$R=6$  days

Her third daughter complete the work in  $=72/6= 12$  Days

10. A contractor takes a road construction project to finish it in 40 days and for that he engaged 200 men. After 30 days he employed 100 more men in this project, then the work finished on time. Find if the 100 more men would not worked then how many more days required to finish the work ?

- A) 8 days
- B) 10 days
- C) 12 days
- D) 7 days
- E) None of these.

**View Answer**

**Option E**

**Solution:**

$100 * 10 \text{ days} = 1000$

Now  $1000/200 = 5$  days (Initial total no. of men engaged in the project)

Hence ,5 more days required to finish the work if 100 more men would not joined .

1. A cistern can be filled by two pipes separately in 6 and 9 mins respectively. Both pipes are opened together for a certain time but being clogged, only  $\frac{5}{6}$  of full quantity water flows through the first and only  $\frac{3}{4}$  through the second pipe. The obstructions, however, being suddenly removed, the cistern is filled in 2 mins from that moment. How long was it before the full flow began?
- A) 3 min
  - B) 2 min
  - C) 1 min
  - D) 2.5 min
  - E) 1.5 min

**View Answer****Option B****Solution:**

total units .....36

first pipe ..... $36/6 = 6$  unitssecond..... $36/9 = 4$ unitsnow,  $(\frac{5}{6} * 6 + \frac{3}{4} * 4) T + 2 (6+4) = 36 \gg T = 2$ 

2. Ram and mohan together can complete typing a book of 1575 pages in 25 days working 15 hrs per day. Ram is 20% more efficient than Mohan. A page contains an average of 275 words, then how many words can ram type in an hour?

- A) 525
- B) 600
- C) 625
- D) 630
- E) 645

**View Answer****Option D****Solution:**

Ram : mohan = 6:5

 $R+M = 11$  $R+M = 1575 * 275 / 15 * 25 = 1155$  words in 1 hourram will type =  $1155 * \frac{6}{11} = 630$  words in 1 hour

3. Subhash can copy 70 pages in 16 hours ; Subhash and Prakash together can copy 275 pages in 40 hours. In how much time can Prakash copy 30 pages ?

- A) 15 hr.
- B) 12 hr.
- C) 14 hr.
- D) 18 hr.
- E) None of these.

**View Answer****Option B****Solution:**

Subhash can copy 70 pages in 16 hours so In 40 hours he can copy  $70 * 2.5 = 175$  pages. Hence prakash can copy 100 pages in 40 hours . Thus , he can copy 30 pages in 30% of the time i.e 12 hours.

4. A and B together can do a piece of work in 12 days which B and C together can do in 16 days. After A has been working at it for 5 days and B for 7 days, C finishes it in 13 days. In how many days could each do the work by himself ?
- A) 24, 12, 36  
B) 24, 16, 12  
C) 16, 48, 24  
D) 24, 36, 12  
E) None of these.

**View Answer**

**Option C**

**Solution:**

Total work = 48 ,...  $A+B = 4$  .... $B+C = 3$

now,  $5A + 7B + 13C = 48$

split it

$5A + 5B + 2B + 2C + 11C = 48$

so  $5*4 + 2*3 + 11c = 48$

so  $11c = 22$  .....  $c = 2$

so c alone =  $48/2 = 24$

A —  $48/3 = 16$

B—  $48/1 = 48$

5. 24 men take 12 days to complete a piece of work . They worked for a period of 4 days . After that , they were joined by 8 more men . How many more days will be taken by them to complete the remaining work?
- A) 8 days  
B) 9 days  
C) 7 days  
D) 6 days  
E) None of these.

**View Answer**

**Option D**

**Solution:**

$24*12 - 24*4 = (24+8) x$

By solving we get  $x = 6$  days

6. In two days A, B and C together can finish  $1/4$  of a work and in another 2 days B and C together can finish  $1/5$  part of the work. Then A alone can complete the whole work in?
- A) 10 days  
B) 20 days

- C) 40 days  
 D) 35 days  
 E) None of these.

**View Answer**

**Option C**

**Solution:**

work ..... 20

$a+b+c = 5$  in 2 days

$b+c = 4$  in 2 days

$a = 1$  in 2 days >> 40 days total

or

$2(a+b+c) = 1/4 \Rightarrow a+b+c = 1/8$

$2(b+c) = 1/5 \Rightarrow b+c = 1/10 > a = 1/8 - 1/10 = 1/40 = 40$  days

7. A team of 100 men is supposed to do a work in 60 days. After 35 days, only 5/12 of the work was completed, so to complete the work before 40 more men were employed. If 40 men were not employed, how many extra days were required to complete the work by earlier number of men?

- A) 11 days  
 B) 15 days  
 C) 12 days  
 D) 14 days  
 E) None of these.

**View Answer**

**Option D**

**Solution:**

100 men completed 5/12 work in 35 days

So 100 men can complete the remaining 7/12 work in 49 days:

Use  $M_1 \cdot D_1 \cdot W_2 = M_2 \cdot D_2 \cdot W_1$

$100 \cdot 35 \cdot (7/12) = 100 \cdot D_2 \cdot (5/12)$

$D_2 = 49$  days

But after 35 days, 40 more men were employed, so 140 men now and they completed 7/12 work in

By  $M_1 \cdot D_1 \cdot W_2 = M_2 \cdot D_2 \cdot W_1$

$100 \cdot 35 \cdot (7/12) = 140 \cdot D_2 \cdot (5/12)$

$D_2 = 35$  days

So extra days =  $49 - 35 = 14$  days

8. Two typist of varying skills can do a job in 6 minutes if they work together. If the first typist typed alone for 4 minutes and then second typed for 6 minutes, they would be

left with  $\frac{1}{5}$  of the whole work. How many minutes would it take the slower typist to complete the work alone ?

- A) 10 min
- B) 12 min
- C) 15 min
- D) 20 min
- E) None of these.

**View Answer**

**Option C**

**Solution:**

The first typist types for 4 minutes and second one for 6 minutes , the work left would be the work the first typist can do in 2 minutes. Thus the time taken by the first typist to do the work would be 10 minutes and his rate of work would be 10% per minute . Since both can do whole work in 6 minutes their combined efficiency =  $\frac{100}{6} = 16.66\% >$  second typist = 6.66%

so he would take =  $\frac{100}{6.66} = 15$  minutes.

9. Tap A can fill a tank with water in 10 hrs. Tap B fills the same tank with milk in 12.5 hrs. A man who wanted to fill the tank with the mixture opens tap A first , which already contains 8% milk of its own capacity. After two hours he opened tap B till the tank gets filled completely. In what proportion should he mix this solution with the other one containing water and milk in the ratio 2 : 3, so that the new solution will contain half milk and half water?

- A) 2:3
- B) 1:1
- C) 1:2
- D) 2:1
- E) 1:3

**View Answer**

**Option B**

**Solution:**

Total work – 50

a== 5

b== 4

it already contain 8% milk = 4 lit

a— in 2 hrs =  $5 \times 2 = 10$  lit water

so, total fill = 14 lit. remain. = 36 lit

done by a+b in  $\frac{36}{9} = 4$  hrs

so, water added by a —  $4 \times 5 = 20$  litre

milk added by b —  $4 \times 4 = 16$  litre

so. Total water =====  $10 + 20 = 30$  litre

Total milk =====  $4 + 16 = 20$  litre



$$W:M = 3:2$$

$$\text{now } \frac{3}{5} \frac{\quad\quad\quad}{\quad\quad\quad} \frac{2}{5}$$

$$\frac{\quad\quad\quad}{\quad\quad\quad} \frac{1}{2} \frac{\quad\quad\quad}{\quad\quad\quad} 1:1$$

10. A, B, C complete a work in 15, 20 and 30 days . They work together for sometime after which C left. A total of 18000 rs is paid for the work and B gets 6000 rs more than C. For how many days did A work ?

- A) 8 days
- B) 10 days
- C) 12 days
- D) 7 days
- E) None of these.

**View Answer**

**Option A**

**Solution:**

Total work = 60

A — 4 ,, B— 3 ,, C — 2

let A & B work for x days

Then work done by A = 4x

B = 3x

C = 60 - (4x + 3x)

So ratio of their share

4x : 3x : 60 - 7x

Difference between b and c = 3x - (60 - 7x) = 10x - 60

( 10x - 60 ) / 60 \* 18000 = 6000

so, x = 8

1. B takes twice time as A to complete a work and C takes thrice time as B to complete a work. If Rs6000 is given to them to complete a work together then B gets how much amount?

- A) Rs1800
- B) Rs3600
- C) Rs600
- D) Rs3000
- E) Rs1200

**View Answer**

**Option A**

**Solution:**

|   |         |         |
|---|---------|---------|
| . | B.....A | B.....A |
| . | 2.....1 | 1.....3 |

|            |                           |
|------------|---------------------------|
| Days       | A.....B.....C             |
| .          | 1.....2.....6             |
| Efficiency | 6.....3.....1             |
| .          | $3/10 \times 6000 = 1800$ |

2. A & B can do a piece of work in 80days. B & C can do same work in 50days and C & A can do same work in 60days. Find in how many days they all together can complete that work?

- A) 40 (40/59)
- B) 60 (40/59)
- C) 36 (40/59)
- D) 25 (40/59)
- E) 26 (40/59)

**View Answer**

**Option A**

**Solution:**

$$\text{LCM} = 2400$$

$$A + B = 80 \dots\dots\dots 2400/80 = 30$$

$$B + C = 50 \dots\dots\dots 48$$

$$C + A = 60 \dots\dots\dots 40$$

$$2(A + B + C) = 118$$

$$A + B + C = 59$$

$$\text{So } 2400/59 \text{ days}$$

3. A & B separately can do a piece of work in 9days and 12days respectively. If they work for a day alternatively, A starts the work, in how many days will the work will get completed?

- A)  $12(1/4)$
- B)  $10(1/4)$
- C)  $8(1/6)$
- D)  $10(5/6)$
- E)  $9(1/6)$

**View Answer**

**Option B**

**Solution:**

$$A=9 \quad 4$$

$$B=12 \quad 3 \quad [\text{LCM}=36]$$

$$2 \text{ days alternate} \quad (4+3) = 7 \text{ days}$$

$$2 \times 5 \quad 7 \times 5$$

$$10 \text{days} \quad 35 \text{days}$$

$$\text{now A's turn so- } 10(1/4) \text{ days}$$

4. 4men and 6boys earn Rs1600 in 5days, 3men and 7boys earn Rs1740 in 6days, in what time will 7men and 6boys earn Rs3760?
- A) 4days
  - B) 6days
  - C) 8days
  - D) 10days
  - E) 5days

**View Answer**

**Option C**

**Solution:**

$$4M + 6B = 1600/5 = 320 \dots\dots\dots(1)$$

$$3M + 7B = 1740/6 = 290 \dots\dots\dots(2)$$

FROM EQUATION (1) AND (2) WE GET

$$(4*7)B - (3*6)B = 290*4 - 320*3$$

$$B = Rs20 \dots\dots \text{put in (1)}$$

$$M = Rs50$$

now required number of days

$$3760 / (7*50 + 6*20) = 3760 / 470 = 8 \text{days}$$

5. A tap take 42hrs extra to fill a tank due to a leakage equivalent to half of its inflow. The inlet pipe alone can fill the tank in how many hour?
- A) 42hrs
  - B) 21hrs
  - C) 36hrs
  - D) 28hrs
  - E) 30hrs

**View Answer**

**Option A**

**Solution:**

|            |                   |           |
|------------|-------------------|-----------|
| .          | Without leak..... | With leak |
| Efficiency | 2.....            | 1         |
| Time       | 1.....            | 2         |
| .          | +1 == 42hours     |           |

So 42hours

6. A tank can be filled with two pipes in 30minutes and 45minutes. When the tank was empty the two pipes A and B were opened. After some time, the first pipe A was closed and the tank was filled in 24minutes. After how much time from the start was the first pipe A closed?
- A) 16 days
  - B) 15 days
  - C) 14 days
  - D) 12 days
  - E) 10 days

**View Answer**

**Option C**

**Solution:**

$$A = 30, B = 45$$

$$\text{LCM} = 90$$

$$\text{So, } A = 90/30 = 3$$

$$. B = 90/45 = 2$$

B worked for all 24 days means did  $24 \times 2 = 48$  units work

$$\text{Remaining work} = 90 - 48 = 42$$

This work is done by A, so  $42/3 = 14$  days

7. A boy and a girl together fill a cistern with water. The boy pours 3ltr of water in every 2minutes and the girl pours 2ltr of water in every 3minutes. How much time will it take to fill 91ltr of water in the cistern?

A) 36min

B) 42min

C) 48min

D) 44min

E) 45min

**View Answer**

**Option B**

**Solution:**

$$\text{boy } 2\text{min} = 3\text{ltr}$$

$$\text{girl } 3\text{min} = 2\text{ltr}$$

make time same

$$6\text{min} \dots\dots\dots 13\text{ltr}$$

$$*7 \dots\dots\dots *7$$

$$42\text{min} \dots\dots\dots 91\text{ltr}$$

8. A and B together can complete a work in 30days and B alone can do it in 60days. Find in how many days A alone can do the work?

A) 40

B) 60

C) 120

D) 90

E) 110

**View Answer**

**Option B**

**Solution:**

$$A+B \dots 30 \dots\dots 2$$

$$B \dots\dots 60 \dots\dots 1 \dots\dots\dots (\text{LCM}=60)$$

$$A \dots\dots\dots 1$$

$$A = 60/1 = 60$$

9. A and B can do a work in 18days. They started together but after 8days A left the work. If B does the remaining work in 20days, then in how many days A will do the work alone?

- A) 18
- B) 24
- C) 36
- D) 48
- E) 50

**View Answer**

**Option C**

**Solution:**

$$A+B = 18$$

Let total work = 18

1day work of A & B = 1

8days work of A&B = 8

remaining = 18 - 8 = 10

B does 10 work in 20days

So 18 work in 36days

$$A+B = 18$$

$$B = 36$$

$$LCM = 36$$

$$A+B = 18 \dots\dots\dots 36/18 = 2$$

$$B = 36 \dots\dots\dots 36/36 = 1$$

So A = 1

$$\text{So days A} = 36/1 = 36$$

10. A can write 75pages in 25hrs. A and B together can write 135pages in 27hrs. In what time can B write 42pages?

- A) 17
- B) 19
- C) 23
- D) 21
- E) 20

**View Answer**

**Option D**

**Solution:**

A can write  $75/25 = 3$ pages in 1hr

A+B can  $135/27 = 5$ pages in 1hr

B can write  $5-3 = 2$ page in 1hr

$$42/2 = 21\text{hrs}$$

1. A & B can separately finish the work in 30 days and 50 days respectively. They worked together and A left the work, so B complete the remaining work in 10 days. Find after how many days A left the work?
- A) 10days  
B) 12days  
C) 15days  
D) 20days  
E) 18days

**View Answer**

**Option C**

**Solution:**

$$A = 30 \dots\dots\dots 5$$

$$B = 50 \dots\dots\dots 3 \quad (\text{LCM} = 150)$$

$$A + B = 8$$

$$B\text{'s work in 10days} = 3 \times 10 = 30$$

$$\text{Means they together did } \dots\dots 120$$

$$120/8 = 15\text{days}$$

2. A is 20% more efficient than B and 50% more efficient than C. if they together can do a work in 24 days then find in how many days B alone can do the work?
- A) 60days  
B) 72days  
C) 90days  
D) 180days  
E) 100days

**View Answer**

**Option B**

**Solution:**

|   |   |       |   |  |   |       |   |
|---|---|-------|---|--|---|-------|---|
| . | A | ..... | B |  | A | ..... | C |
|---|---|-------|---|--|---|-------|---|

|            |   |       |   |  |   |       |   |
|------------|---|-------|---|--|---|-------|---|
| Efficiency | 6 | ..... | 5 |  | 3 | ..... | 2 |
|------------|---|-------|---|--|---|-------|---|

|      |   |       |   |  |   |       |   |
|------|---|-------|---|--|---|-------|---|
| Days | 5 | ..... | 6 |  | 2 | ..... | 3 |
|------|---|-------|---|--|---|-------|---|

Days A : B : C

.      10 12 15

$$A = 10 \dots\dots\dots 6$$

$$B = 12 \dots\dots\dots 5 \dots\dots \quad (\text{LCM} = 60)$$

$$C = 15 \dots\dots\dots 4$$

$$A+B+ C = 15$$

$$60/15=4$$

$$4=24$$

$$1= 6$$

$$B=12= 12 \times 6 = 72\text{days}$$

3. A can make 10000 papers in an hour B can make 8000 papers in an hour. Find in how many days they both can make 5,90,000 papers, if A do work for 7 hours and B do work for 6 hours?

- A) 4days
- B) 3days
- C) 5days
- D) 6days
- E) 7days

**View Answer**

**Option C**

**Solution:**

A's 1hr work = 10,000

7hr work = 70,000

B's 1hr work = 8000

6hr work = 48,000

Total work of A& B of 1day = 70,000+48,000= 1,18,000

So  $590000/118000 = 5$ days

4. 7 men and 5 women can do a work in 6 days. Also 6 men and 7 women can do same work in 6 days. Find in how many days will 2 men & 2 women can finish the work?

- A) 19days
- B) 15days
- C) 10days
- D) 14days
- E) 22days

**View Answer**

**Option A**

**Solution:**

$7M + 5W = 6$

$42M + 30W = 1 \dots \dots \dots (1)$

$6M + 7W = 6$

$36M + 42W = 1 \dots \dots \dots (2)$

FROM (1) & (2)

$42M + 30W = 1$

$-36M (-) + 42W = (-)1$

$6M - 12W = 0$

$6M = 12W$

$M = 2W \dots \dots \dots$  PUT IT IN EQUATION(1)

SO ..  $14W + 5W = 6$

$19W = 6$

$1W = 6/19$

$6W = 6 \cdot 19/6 = 19$ DAYS

5. A & B can do a work in 18 days. They started work together and A left after 7 days and B did the remaining work in 33 days. Find in how many days A can alone do the work?
- A) 18  
B) 54  
C) 27  
D) 36  
E) 32

**View Answer**

**Option C**

**Solution:**

let total work = 18

Efficiency of A & B's work of 1day = 1

In 7days they complete = 7 work

Remaining =  $18 - 7 = 11$

B do 11 work = 33 days

1 work = 3days

18work = 54days

So ..... A+B = 18.....3 (LCM = 54)

. B = 54.....1

So A =  $3 - 1 = 2$

A =  $54/2 = 27$ days

6. A tap can fill a tank in 16 hrs but due to a leak it takes 6 hrs more. If leakage withdraw 9ltr water in an hour than find the quantity of tank?
- A) 520ltr  
B) 528ltr  
C) 536ltr  
D) 544ltr  
E) 576ltr

**View Answer**

**Option B**

**Solution:**

A = 16 .....11 (LCM = 176)

A+B=22 .....8

So B =  $11 - 8 = 3$

$176/3 * 9 = 528$ ltr.

7. A & B can do a work in 35 days and 45 days respectively. They worked for 10 days and after then they complete the work with the help of C in 15 days. If they all get Rs 770. Then find the share of C?
- A) 330  
B) 270  
C) 190



- D) 170  
E) 250

**View Answer**

**Option D**

**Solution:**

$$A = 35 \dots\dots\dots 11 \quad (\text{LCM} = 385)$$

$$B = 45 \dots\dots\dots 9$$

$$A+B=20$$

$$20 \times 10 = 200$$

$$\text{Remaining } 385 - 200 = 185$$

This work is completed in 5 days. So  $185/5 = 37$

$$A \& B \text{ 5 days work} = 20 \times 5 = 100$$

$$C's \text{ 5 days work} = 85$$

$$A \dots\dots\dots B \dots\dots\dots C$$

$$11 \times 15 \quad 9 \times 15 \quad 85$$

$$165 \quad 135 \quad 85$$

$$33 \quad 27 \quad 17$$

$$C's \text{ share} = \frac{17}{77} * 770 = 170$$

8. 1 man or 2 women or 3 children can do a work in 55 days. Find in how many days 1 man and 1 woman and 1 child can do the work?
- A) 30 days  
B) 24 days  
C) 25 days  
D) 28 days  
E) 32 days

**View Answer**

**Option A**

**Solution:**

$$1M = 55 \quad 1$$

$$2W = 55 \quad 1 \quad 55$$

$$2C = 55 \quad 1$$

We need 1 day work of ...  $1M + 1W + 1C = 1 + 1/2 + 1/3 = 11/6$

$$\text{So } \dots\dots\dots 55 / (11/6) = 55/11 * 6 = 30 \text{ DAYS}$$

9. A can a work in 50 days and B is 50% efficient than A. find in how many days A and B together can complete the work?
- A) 30  
B) 40  
C) 50  
D)  $33(1/3)$   
E)  $16(2/3)$

**View Answer****Option D****Solution:**

B is 50% efficient than A

. A.....B

Efficiency 2..... 1

Days 1.....2

1 == 50 . So 2 == 100

A= 50.....2 (LCM = 100)

B =100.....1

A+ B = 3

100/3 =33(1/3) days.

10. A and B can do a work in 60days. B and C can do same work in 40 days and C and A can do same work in 50 days. Find in how many days will A,Band C work together will finish the work?

A) 32(16/37)

B) 42(14/37)

C) 33(7/37)

D) 43(9/37)

E) 39(7/37)

**View Answer****Option A****Solution:**

A+B = 60.....10

B+C = 40.....15.....(LCM = .600)

C+A = 50.....12

2(A+B+C) 37

A+B+C = 37/2

= 600/37 \* 2 = 32(16/37)

1. A and B can do a piece of work in 25 days and 50 days respectively. If they start working together and a person C alone does the work for last 4 days then work is done in 14 days. Find in how many days C can do the work alone?

A) 8 days

B) 10 days

C) 20 days

D) 25 days

E) 15 days

**View Answer****Option B****Solution:**

$$A=25 \text{ ————— } 2 \text{ (Total work=50)}$$

$$B=50 \text{ ————— } 1$$

$$A+B = \text{ ————— } 3$$

A and B did the work for  $14-4=10$  days

$$(A+B)*10=3*10= 30 \text{ work}$$

$$\text{remaining work}=50-30=20$$

C did 20 work in 4 days;

$$1 \text{ day} = 5 \text{ work}$$

so 50 work in 10 days

2. A and B can do a work in 60 days, B and C can do a work in 40 days and C and A can do the same work in 50 days. Find in how many days they together can complete the work?

A)  $32 \frac{16}{37}$  days

B)  $42 \frac{16}{37}$  days

C)  $32 \frac{16}{27}$  days

D)  $42 \frac{16}{27}$  days

E)  $32 \frac{16}{17}$  days

**View Answer**

**Option A**

**Solution:**

$$A+B =60 \text{ ————— } 10 \text{ (Total Work = 600)}$$

$$B+C =40 \text{ ————— } 40$$

$$C+A = 50 \text{ ————— } 12$$

$$2 (A+B+C)= \text{ ————— } 37$$

$$A+B+C = 37/2$$

$$600*2/37= 32 \frac{16}{37}$$

3. 1 man or 2 women or 3 children can do a work in 66 days. Find in how many days 1 man and 1 women and 1 child can do the same work?

A) 24 days

B) 28 days

C) 30 days

D) 36 days

E) 38 days

**View Answer**

**Option D**

**Solution:**

$$1 \text{ M ——— } 66 \text{ ——— } 1 \text{ (Total Work=66)}$$

$$2 \text{ W ——— } 66 \text{ ——— } 1$$

$$3C = 66 - 1$$

$$1 \text{ day work of } 1M + 1W + 1C = 1 + \frac{1}{2} + \frac{1}{3} = \frac{11}{6}$$

$$66 / (\frac{11}{6}) = 36 \text{ days}$$

4. A and B can do a job in 25 days. They started working together and after 10 days B left the work. Then A did the remaining work in 60 days. Then find in how many days B alone can do the same work?
- A) 30 days  
 B)  $33 \frac{1}{3}$  days  
 C) 40 days  
 D) 45 days  
 E) 47 days

**View Answer**

**Option B**

**Solution:** Let total work = 25

1 day work of A and B = 1

Remaining work after 10 days =  $25 - 10 = 15$

B do 15 work in 60 days

means 25 work in  $60 * \frac{25}{15} = 100$  days

$A + B = 25 \frac{1}{4}$  (Total Work = 10)

$B = 100 \frac{1}{3}$

$A = 25 - \frac{100}{3} = 4 - \frac{1}{3} = 3 \frac{2}{3}$

$B = 100/3$

5. A tap can fill a tank in 30 minutes. But due to leakage in tank it takes 36 minutes to fill the tank. If leakage point withdraws 20 litre water every minute then find the capacity of tank.
- A) 2400 litre  
 B) 3000 litre  
 C) 3600 litre  
 D) 4000 litre  
 E) 4500 litre

**View Answer**

**Option C**

**Solution:** Let leakage = B

$A = 30 \frac{1}{6}$  (Total = 180)

$A + B = 36 \frac{1}{5}$

$B = 6 - \frac{1}{5} = 5 \frac{4}{5}$

B will empty the tank in 180 minutes (1 = 180)

capacity =  $180 * 20 = 3600$  litres

6. A and B can do a work in 40 days and 60 days respectively. They start work together and work for 15 days then C joins them and they finish the work in 20 days. If they get total wage of Rs 720 then find the share of C.

- A) Rs 100
- B) Rs 240
- C) Rs 360
- D) Rs 120
- E) Rs 150

**View Answer**

**Option D**

**Solution:**

$$A=40 \text{ ————— } 3 \text{ (Total = 120)}$$

$$B=60 \text{ ————— } 2$$

$$A+B=\text{—————} 5$$

In 15 days =  $5 \times 15 = 75$  work

45 remaining which is completed in 5 days, means

1 day work of A, B and C is 9

1 day work of C =  $9 - 5 = 4$

5 day work of C = 20

ratio of wages A:B:C =  $60(3 \times 20) : 40(2 \times 20) : 20 = 3:2:1$

Share of C =  $\frac{1}{6} \times 720 = 120$

7. 5 men and 7 women can complete a work in 13 days while 4 men and 6 women can complete it in 16 days. Find in how many days will 2 men and 6 women complete the work?

- A) 24 days
- B) 22 days
- C) 20 days
- D) 28 days
- E) 26 days

**View Answer**

**Option E**

**Solution:**

$$5 M + 7W = 13 \text{ days}$$

$$65 M + 91 W = 1 \text{ day} \dots\dots\dots(1)$$

$$4 M + 6 W = 16 \text{ days}$$

$$64 M + 96 W = 1 \text{ day} \dots\dots\dots(2)$$

From (1) and (2)

$$1 M = 5W$$

Put in 1,  $5M = 25W$   
So  $25W + 7W = 13$  days  
 $32 W = 13$   
 $1 W = 13 \times 32$  days  
So  $16 W = 13 \times 32 / 16 = 26$  days

8. In a camp, there is a food for 400 students for 30 days but after 20 days, 200 students left. For how many more days the food will last now?

- A) 10 days
- B) 30 days
- C) 40 days
- D) 20 days
- E) 5 days

**View Answer**

**Option A**

**Solution:**

$$400 \times 30 = 400 \times 20 + (200 \times x)$$

$$12000 = 8000 + 200x$$

$$\text{Solve, } x = 20 \text{ days}$$

$$\text{Total days} = 20 + 20 = 40 \text{ days}$$

$$\text{More days} = 40 - 30 = 10 \text{ days}$$

9. A group of men decided to do a work in 10 days but five of them did not come. If the rest of the group completed the work in 12 days, find the original number of men.

- A) 24
- B) 22
- C) 30
- D) 28
- E) 26

**View Answer**

**Option C**

**Solution:**

$$x \times 10 = (x - 5) \times 12$$

$$\text{Solve, } x = 30 \text{ men}$$

10. A is thrice good a workman as B and B is half as good as workman as C. Find the ratio of days in which A, B and C can complete work alone respectively.

- A) 3 : 6 : 2
- B) 2 : 6 : 3
- C) 2 : 5 : 3
- D) 4 : 6 : 3
- E) 1 : 2 : 4

**View Answer****Option B****Solution:**

|            |       |       |
|------------|-------|-------|
| efficiency | A : B | B : C |
| .          | 3 : 1 | 1 : 2 |

Efficiencies A : B : C = 3 : 1 : 2

So days =  $1/3 : 1/1 : 1/2 = 2 : 6 : 3$ 

1. A & B can do a work in 60 days. B & C can do same work in 30 days. Find in how many days A alone can do the work if C & A can do that work in 40 days?
- A) 240  
B) 360  
C) 120  
D) 480  
E) 180

**View Answer****Option A****Solution:**

LCM = 120

A+B=60 .....  $120/60 = 2$ 

B+C=30 ..... 4

C+A=40 ..... 3

 $2(A+B+C) = 9$ A+B+C =  $9/2$  $(A+B+C) - (B+C) = 9/2 - 4 = 1/2$  $120/1/2 = 240$  days Ans.

2. A contractor takes a contract to do a work in 30 days by 30 men. He found that 10 men were absent in first 10 days. If all men become regular after 10 days then how many more men will be required to complete the work on time?
- A) 35  
B) 5  
C) 25  
D) 7  
E) 6

**View Answer****Option B****Solution:**Total work –  $30 \times 30 = 900$

$$\begin{array}{r} \text{1st 10 day work} - 20 \times 10 = 200 \\ \dots \qquad \qquad \qquad \qquad \qquad \qquad 700 \end{array}$$

Now 700 work have to complete in 20 days.

So  $700/20 = 35$  men will be require. 30 men are already working so now we need only 5 men.

3. A tap can fill a tank in 18 hours, due to leakage it takes 18 hours more to fill the tank. If leakage empty 40ltr water in 1 hour then find the capacity of tank?

- A) 720ltr
- B) 480ltr
- C) 1400ltr
- D) 1440ltr
- E) 1320ltr

**View Answer**

**Option D**

**Solution:**

$$\text{LCM} = 36$$

$$A = 18 \dots \dots \dots 2$$

$$A+B = 1 - 1$$

$$B = 1$$

B removes 1 qty in 1 hour so he will empty in 36 hour.

$$40 \times 36 = 1440 \text{ltr.}$$

4. A man & a woman can do a job in 40 days. They do work together for 12 days after it with the help of a child they complete the work in 18 days. If they get Rs2000 then find how much money will child get?

- A) 600
- B) 900
- C) 500
- D) 1100
- E) 700

**View Answer**

**Option C**

**Solution:**

$$\text{LCM} = 120$$

$$A = 40 \dots \dots \dots 120/40 = 3$$

$$B = 60 \dots \dots \dots 2$$

$$\dots \dots \dots 5$$

$$12 \times 5 = 60$$

Remaining 60 will complete in 6 days. So  $60/6 = 10$ . Now this 10 work will be complete by together .

Child do 5 work in a day . now the ratio of the total work of all them.

$$A \dots \dots \dots B \dots \dots \dots C$$

$$3 \times 18 \dots \dots 2 \times 18 \dots \dots 5 \times 6$$



54..... 36..... 30  
9 : 6 : 5  
Child –  $5/20 * 2000 = 500$

5. If a man or 2 women or 3 children can do a work in 33 days, then find in how many days will 1 man and 1 woman and 1 child do the work?

- A) 18 days
- B) 24 days
- C) 20 days
- D) 15 days
- E) 22 days

**View Answer**

**Option A**

**Solution:**

LCM = 33

1 man = 33..... 1

2 woman = 33..... 1

3 child = 33..... 1

Now we need 1 man + 1 woman + 1 child

$= 1 + 1/2 + 1/3 = 11/6$

$33/11 * 6 = 18$  days

6. 40 men undertook to do a work in 50 days. After 25 days they found only 1/3rd of the work is complete. Find how many more men they need to complete the work on time.

- A) 40
- B) 50
- C) 60
- D) 70
- E) 30

**View Answer**

**Option A**

**Solution:**

$40 * 25 / 1/3 = (40+x) * 25 / 2/3$

$80 = 40+x$

$X = 40$  Ans

7. 33 men can do a job in 30 days. If 44 men started the job together and in the end of the day one person left daily. Then what is the minimum number of days required to complete the work?

- A) 21
- B) 42
- C) 45
- D) 44
- E) 36

**View Answer**

**Option D**

**Solution:**

$$\text{total work} = 33 \times 30 = 990$$

$$44 + 43 + 42 = 990$$

$$\text{Now : sum} = x/2 (20 + (x-1) D)$$

$$A = 44, D = 43 - 44 = -1$$

$$990 = x/2 (2 \times 44 + (x-1) - 1)$$

$$X = 44 \text{ Ans.}$$

8. 5 men can do a piece of work in 2 hours, while 7 women can do in 3 hours or 9 boys do in 4 hours.

How long would take by 1 man, 1 woman, 1 boy together to do the work?

A) 1260/221

B) 1270/231

C) 1221/260

D) 1260/236

E) 1234/241

**View Answer**

**Option A**

**Solution:**

$$1 \text{ man complete the work in} = 2 \times 5 = 10 \text{ hrs.}$$

$$\text{Same 1 woman} = 21 \text{ hrs}$$

$$1 \text{ boy} = 36 \text{ hrs}$$

$$\text{LCM} = 1260$$

$$M = 10 \dots\dots\dots 1260/10 = 126$$

$$W = 21 \dots\dots\dots 60$$

$$B = 36 \dots\dots\dots 35$$

$$\dots\dots\dots 221$$

$$= 1260/221 \text{ Ans}$$

9. If 30 men and 14 boys can reap a field in 21 days. In how many days will 20 men and 4 boys will reap it? (When 3 men do as much as work as 5 boys.)

A) 36 days

B) 30 days

C) 42 days

D) 45 days

E) 32 days

**View Answer**

**Option A**

**Solution:**

3 men = 5 boys  
 $M/B = 5/3$   
 Total work =  $(30 M + 14B) * 21$   
 $(30*5 + 14*3) * 21$   
 = 4032  
 Now:  $4032/20*5+4*3= 36$  days.

10. A, B, and C can do a work in 18, 30, and 45 days respectively. If they start work with A works the first day, C the second day and B the third and fourth day. If this process continues than find in how many days they will complete the work?

- A) 26 2/3 days
- B) 28 days
- C) 27 2/3 days
- D) 27 days
- E) 27 1/3 days

**View Answer**

**Option C**

**Solution:**

A = 18, B = 30, C = 45

LCM = 90

A =  $90/18 = 5$ , B = 3, C = 2

1st day.....2nd day.....3rd day

A=5.....C=2.....B=3+3

than

4 days work =  $5 + 2 + 6 = 13$

Make it near total (90)

$4*6$ .....  $13*6$

24.....78

A -> 1 .....5

B -> 1.....2

C -> 1.....3

Add

$24+1+1+1=27$  days..... $(78+5+2+3) = 88$  days

Now  $90-88 = 2$  work pending

B does 3 work in 1 day, so 2 in 2/3. So total 27 2/3 days

1. A can do 2/5 work in 8 days. B can do 3/5 work in 18 days. In how many days together they can do 3/4 work?

- A) 8 days
- B) 9 days
- C) 7 days
- D) 10 days
- E) 12 days

**View Answer**

**Option B**

**Solution:**

A –  $\frac{2}{5}$  work in 8 days  $\Rightarrow$  total =  $8 \times \frac{5}{2} = 20$  days

B-  $\frac{3}{5}$  work in 18 days  $\Rightarrow$  total- 30 days

A+B together =  $30 \times \frac{20}{50} = 12$  days

hence  $\frac{3}{4} \times 12 = 9$  days

2. A and B can do a piece of work in 72 days. B and C can do it in 120 days. C and A can do it in 90 days. In how many days all three together can do the work?

A) 80 days

B) 120 days

C) 100 days

D) 60 days

E) 150 days

**View Answer**

**Option D**

**Solution:**

(total work=360)

A+B= 72 ————— 5

B+C=120 ————— 3

C+A=90 ————— 4

$\Rightarrow 2(A+B+C)=12$

A+B+C=6

total days =  $360/6 = 60$  days

3. Working efficiency of A and B for completing a piece of work is in the ratio 2:3. Find the number of days they will take to complete the work together, if B takes 30 days less than A.

A) 24 days

B) 48 days

C) 60 days

D) 36 days

E) 40 days

**View Answer**

**Option D**

**Solution:**

A:B (efficiency)=2:3

A:B(days)=3:2

$$\text{Diff}=1=30$$

$$2=60$$

$$3=90$$

$$A=90 \text{ days;}$$

$$B=60 \text{ days}$$

$$\text{together } A+B= 36 \text{ days}$$

4. 6 men and 10 women can do a work in 8 days. 4 men and 12 women can do same work in 10 days. Find in how many days 3 men and 5 women can do the work.

- A) 12 days
- B) 16 days
- C) 20 days
- D) 24 days
- E) None of these

**View Answer**

**Option B**

**Solution:**

$$6m+10w=8 \Rightarrow 48m+80w=1 \text{ ---(i)}$$

$$4m+12w=10 \Rightarrow 40m+120w=1 \text{ ---(ii)}$$

equate (i) and (ii)

we get,  $1m=5w$ , put this in (i)

$$30w+10w=8 \Rightarrow 40w=8 \text{ days}$$

$$\text{hence } 3m+5w=20w=8*40/20=16 \text{ days}$$

5. A certain number of men can complete a job in 30 days. If there were 10 men less it would be completed in 30 days more. How many men are required to complete this job in 20 days?

- A) 30 men
- B) 20 men
- C) 40 men
- D) 10 men
- E) 25 men

**View Answer**

**Option A**

**Solution:**

$$x*30=(x-10)*60 \Rightarrow x=20 \text{ men}$$

$$\text{now } 20*30=x*20 \Rightarrow x=30 \text{ men}$$

6. A and B can do a work in 30 days. They started together but after 10 days B left the work. If A did the remaining work in 40 days, then find in how many days B can alone do the work?

- A) 40 days

- B) 50 days
- C) 30 days
- D) 60 days
- E) 55 days

**View Answer**

**Option D**

**Solution:**

$$A+B=30$$

let total work =30

$$1 \text{ day work of } A+B=1$$

$$10 \text{ days} - 10$$

remaining work =20

A did 20 work in 40 days

so 30 work is done in 60 days

$$A+B=30 \text{ ————— } 2 \text{ (total work =60)}$$

$$A = 60 \text{ ————— } 1$$

$$B= 2-1=1 \Rightarrow 60/1= 60 \text{ days}$$

7. A man and a boy can complete a piece of work in 30 days. They both started the work, but in the last 6 days, only boy does the work and in this way the work got completed in 34 days. How long does the man take alone to complete the work?
- A) 30 days
  - B) 45 days
  - C) 60 days
  - D) 90 days
  - E) 85 days

**View Answer**

**Option B**

**Solution:**

$$1M + 1B= 30 \text{ days}$$

let total work= 30

$$1 \text{ day work of } 1 M+ 1B=1$$

they work together for 34-6=28 days, so they did 28 work together

$$\text{Remaining work} =30-28=2$$

boy does 2 work in 6 days

$$30 \text{ — } 90 \text{ days}$$

$$M+B=30 \text{ ————— } 3$$

$$B=90 \text{ ————— } 1 \text{ (total = 90)}$$

$$M= 3-1=2$$

$$90/2=45 \text{ days}$$

8. The average wage of 200 men is Rs 300. Later on it was discovered that the wage of two workers were misread as 50 and 30 instead of 500 and 300. The correct average was?

- A) 302.6
- B) 303.6
- C) 304.6
- D) 305.6
- E) 306.6

**View Answer**

**Option B**

**Solution:**

$$200 \times 300 = 60000$$

$$\text{new correct total} = 60000 - 50 - 30 + 500 + 300 = 60720$$

$$\text{Avg.} = 60720 / 200 = 303.6$$

9. A, B and C separately can do a piece of work in 11 days, 20 days and 55 days respectively. In how many days the work will be completed if A is assisted by B and C on alternate day?
- A) 2 days
  - B) 4 days
  - C) 6 days
  - D) 8 days
  - E) 10 days

**View Answer**

**Option D**

**Solution:**

$$A=11 \text{ ————— } 20 \text{ (total work=220)}$$

$$B=20 \text{ ————— } 11$$

$$C=55 \text{ ————— } 4$$

$$A+B=31$$

$$A+C=24$$

$$\text{hence 2 days work} = 31 + 24 = 55$$

$$\text{total work } 220 = 55 \times 4 \text{ hence total days} = 2 \times 4 = 8 \text{ days}$$

10. A can do a work in 30 days and B in 40 days. They together work for 12 days and work is completed by C in 3 days. Find in how many days C can do the same work alone?
- A) 10
  - B) 12
  - C) 8
  - D) 15
  - E) 16

View Answer

Option A

Solution:

A= 30 \_\_\_\_\_ 4 (Total=120)

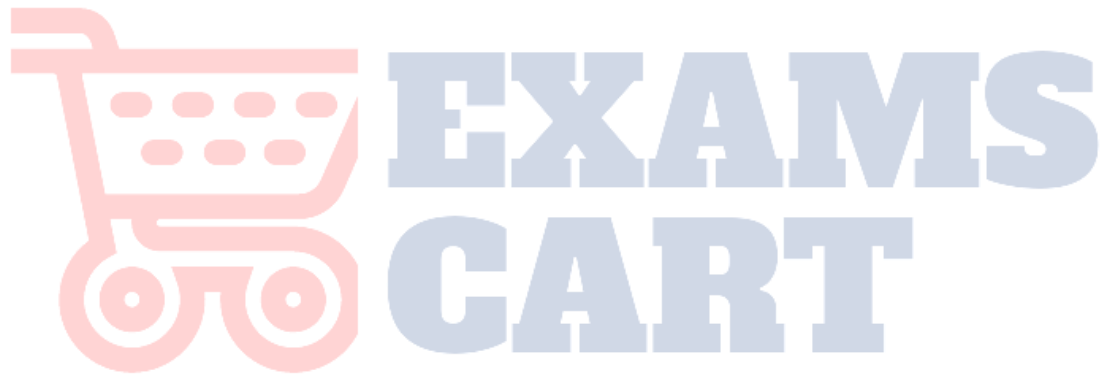
B=40 \_\_\_\_\_ 3

A+B=7

in 12 days  $7 \times 12 = 84$  work is done. Remaining =  $120 - 84 = 36$

this is done by C in 3 days. Means C does 12 work in 1 day. Means 120 work in

$120/12 = 10$  days



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