

GENERAL APTITUDE

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Time & Work

- Work (Effort) = Manpower x time.
- If A can do a piece of work in x days then work done by A in one day is equal to $1/x$ of the entire work.
- If A is twice as good a workman as B then A will take half the time taken by B to do a same piece of work.
- If number of people to do a certain work is increased (or decreased) the time taken to do the same work will decrease (or increase)



Time & Work

Q. A, B & C can complete a certain work in 10, 12 & 15 days respectively. If all of them work together in how many days will the work get completed?



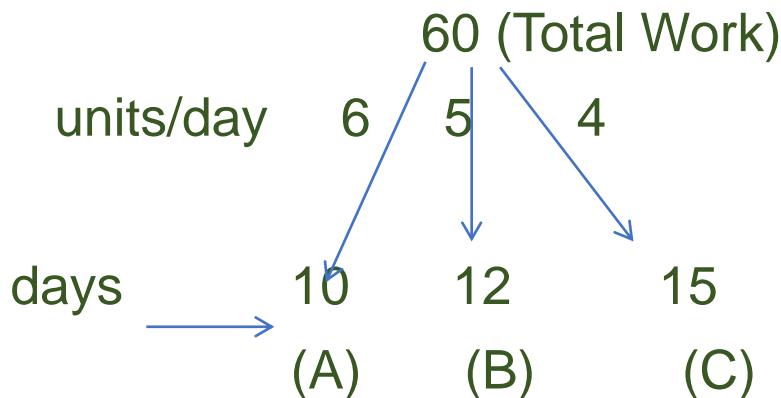
Time & Work

Q. A, B & C can complete a certain work in 10, 12 & 15 days respectively. If all of them work together in how many days will the work get completed?

Soln:

We know, Total work = Days x units/day

$$\text{LCM}(10,12,15) = 60$$



In one day, $A+B+C = 6+5+4 = 15$ units

So to complete TW = 60 units, days = ?

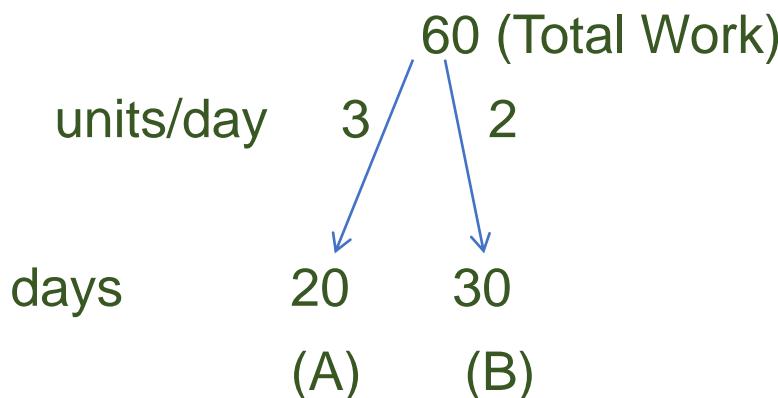
$\text{days} = \frac{60}{15} = 4$. So 4 days are needed to complete the work.

Time & Work

Q. Two persons A & B can complete a work in 20 & 30 days respectively. If both of them start together but A stops after 10 days then how many days will the work last?

- A. 7 days B. 8 days C. 15 days D. 10 days

Soln: $\text{LCM}(20,30) = 60$



A after 10 days, $3 \times 10 = 30$ units & B after 10 days = $2 \times 10 = 20$ units

$$\begin{aligned}\text{Total units} &= 60, \text{ Remaining units} = \text{total} - A + B(\text{after 10 days}) \\ &= 60 - 50 = 10 \text{ units}\end{aligned}$$

$$\text{Days needed to do 10 units work} = \frac{10}{2} = 5 \text{ days}$$

$$\text{So Total Duration} = 10 + 5 = 15 \text{ days}$$

Ans: C



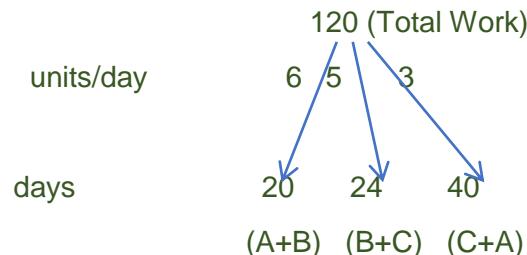
Time & Work

Q. Two persons A & B can complete a work in 20 days , B & C can complete it in 24 days & C and A can complete it in 40 days. Find in how many days will B complete the work alone?

A.30 days B. 40 days C. 50 days

D. 60 days

• Soln: $\text{LCM}(20,24,40) = 120$



No of workers

$$2 \times (A+B+C) = 6+5+3 = 14 \quad \text{i.e. } 2(A+B+C) \text{'s 1 day work}$$

$$A + B+C = 14/2 = 7$$

$$B = 7 - (A+C)$$

$$B \text{ alone} = 7 - 3 = 4 \text{ units/day}$$

$$\text{To find days needed by B} = \frac{\text{Total work}}{\text{units/day}} = \frac{120}{4} = 30 \text{ days}$$

So , 30 days are needed by B to complete the work alone.

Ans :A

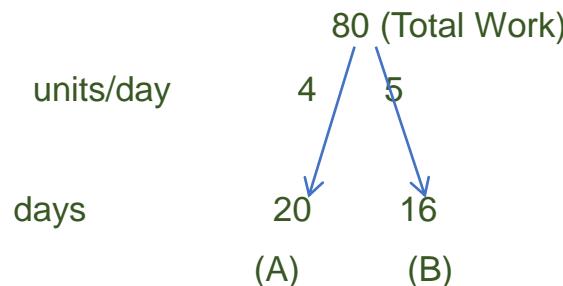


Time & Work

Q. A & B can do a piece of work in 20 & 16 days respectively. If they work on alternate days each starting with A in how many days was the work completed?

- A. 19 days B. 18 days C. 16 days D. 30 days

• Soln: $\text{LCM}(20,16) = 80$



- Day 1, A = 4 units
- Day2, day 1 work added
- $B = 5 + 4 = 9 \text{ units}$
- 9 units \leftarrow 2 days
- 80 units \rightarrow ?
- Days $= \frac{80 \times 2}{9} = \frac{160}{9} = 17.7777 = 17.78 \text{ days}$
- **Ans B**

Time & Work

- Efficiency = capacity to do work
- Efficiency and time are inversely proportional
- Efficiency $\propto \frac{1}{T}$
- Efficiency and work are directly proportional
- Efficiency $\propto W$



Time & Work

Q. A is twice as efficient as B and completes a certain work in 12 days less than B. In how many days will both of them complete the same work?

- A. 6 days B. 8 days C. 7 days D. 3 days

Soln:

$$\begin{array}{rcl} A & & B \\ 2x & - & x = 12 \\ x = 12 & & \end{array}$$

As , Efficiency $\propto \frac{1}{T}$

$$A = 12 \text{ days and } B = 2x = 2 \times 12 = 24 \text{ days}$$

- LCM(12,24) = 24



$$A + B = 2 + 1 = 3 \text{ units/day}$$

$$\text{Days} = \frac{\text{TW}}{\text{units/day}} = \frac{24}{3} = 8 \text{ days}$$

Ans B

or

Days ratio is inversely proportional to efficiency ratio.

Eff (Ratio)	$\frac{A}{2}$	$\frac{B}{1}$
Days (Ratio)	1	2
<i>Days</i>	$x-12$	x

$\rightarrow 2(x-12) = x$
 $\rightarrow x = 24 \text{ days}$
 $\rightarrow x - 12$
 $\rightarrow 24 - 12 = 12 \text{ days}$



Time & Work

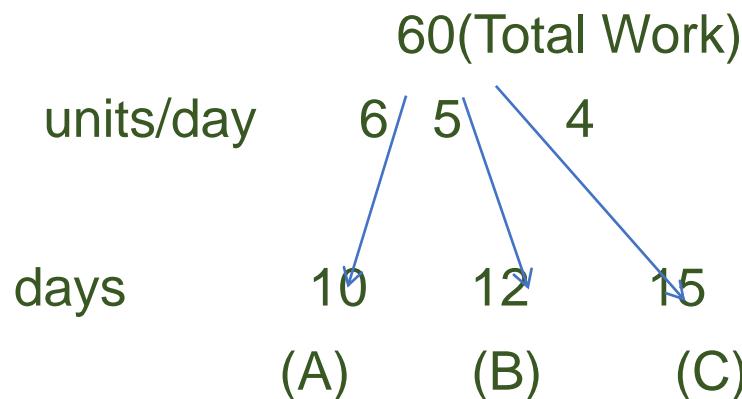
Q. A, B & C can complete a work in 10, 12 & 15 days respectively. All three together completed the work & they are paid Rs 6000. Find the share of C

A. 3000 B. 2400

C. 2000

D. 1600

• Soln: $\text{LCM}(10,12,15) = 60$



Together,

$$(A+B+C) = 6+5+4 = 15 \text{ units/day}$$

Total paid amount to $(A+B+C) = 6000$

$$C = \frac{4}{15} \times 6000$$

$$= \text{Rs. } 1600$$

Ans: D



Time & Work(Assignment)

Q. Two persons A & B can complete a work in 24 & 30 days respectively. If both of them start together .After how many days should B stop working so that A completes the remaining work in 6 days?

- A.7 days
- B. 8 days
- C. 9 days
- D. 10 days

Ans D



Time & Work(Assignment)

Q. Two persons A & B can complete a work in 20 days , B & C can complete it in 30 days while C & A can complete it in 24 days. Find in how many days will B complete the work alone?

- A.36 days
- B. 48 days
- C. 56 days
- D. 64 days

Ans B



Time & Work(Assignment)

Q. A is thrice as good a workman as B and can finish a piece of work in 60 days less than B. Find the time to complete the work if both of them work together

- A. 20 days B. 22.5 days C. 24.5 days D. 22 days

Ans: B



Time & Work(Assignment)

Q. 2 workers A & B can finish a job in 8 days and 12 days respectively ,after the completion of work they were paid Rs.200. Find share of B.

- A. Rs. 120
- B. Rs. 80
- C. Rs. 40
- D. Rs. 60

Ans: B



Work & Time(Assignment)

Q. A, B & C can do a piece of work in 12, 20, & 30 days respectively. If A is assisted everyday alternately by B & C in how many days was the work completed?

- A. 6 days
- B. 8 days
- C. 7 days
- D. 3 days

Ans: B



Work & Time(Assignment)

Q. A can do a piece of work in 10 days, B in 12 days and C in 15 days. They all start work together, but A leaves 2 days later and B leaves 3 days before completion of the work. In how many days was the work completed?

- A. 7 days
- B. 5 days
- C. 8 days
- D. 10 days

Ans: A



Work & Time(Assignment)

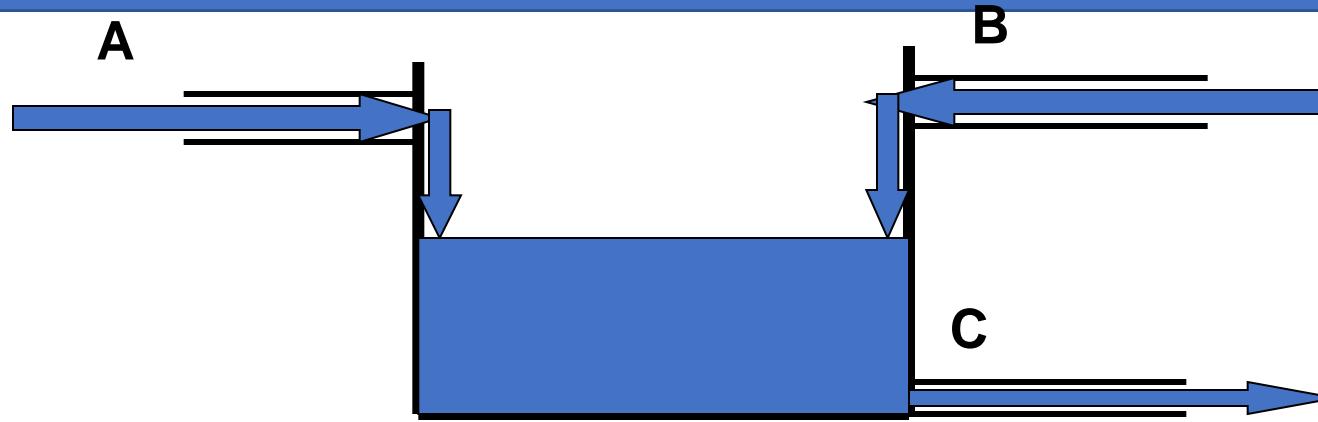
Q. Apurva can do a job in 12 days. She and Amit completed the work together and were paid Rs.54 and Rs.81 respectively. How many days are needed to complete the job together?

- A. 4.8 days
- B. 4.2 days
- C. 4 days
- D. 3.6 days

Ans: A



Pipes & Cisterns



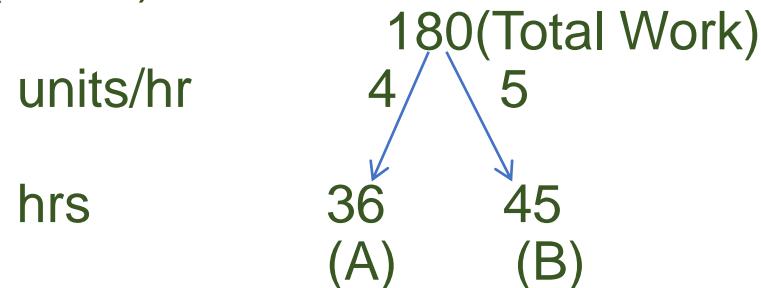
- A cistern may have inlet pipe or outlet pipe.
- Conventionally filling a tank is treated as positive work and emptying a tank as negative work.
- Net work done = (Sum of work done by inlets) – (sum of work done by outlets)

Pipes & Cisterns

Q. Two pipes A and B can fill a tank in 36 hours and 45 hours. If both pipes are opened simultaneously. How much time will it take to fill the tank?

Soln:

- $\text{LCM}(36,45) = 180$



As both are opened , together , $A+B = 4+5 = 9$ units/hr

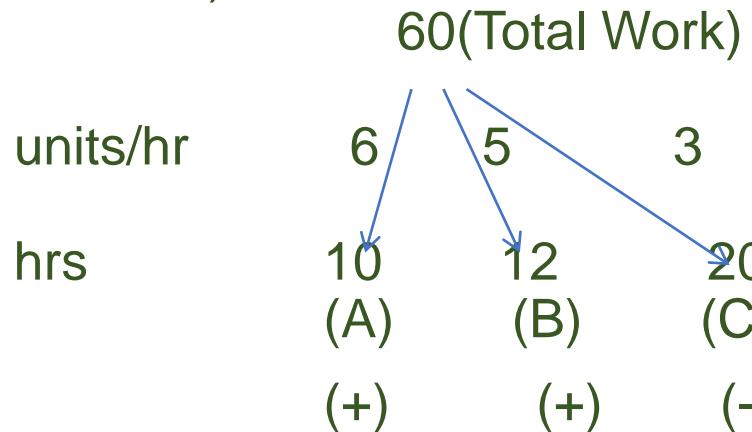
For tank to fill $= \frac{180}{9} = 20$ hours.

Pipes & Cisterns

Q. Two pipes can fill the reservoir in 10 hours and 12 hours respectively. While third pipe empties full tank in 20 hours. If all the three pipes operate simultaneously , how much time will the tank be filled?

Soln:

- LCM(10,12,20) = 60



$$A+B = 6 + 5 = 11$$

As, C empties the tank so, $11 - 3 = 8$ units/hr

Quantity filled in 1 hour if all the pipes are opened together

$$\text{Time to fill} = \frac{\text{TW}}{\text{units/hr}} = \frac{60}{8} = 15/2 \text{ hrs}$$



Pipes & Cisterns

Q. Two pipes A and B can fill a tank in 24 minutes and 32 minutes respectively. If both the pipes are opened simultaneously, after how much time should B be closed so that the tank is full in 18 minutes

A . 2 min

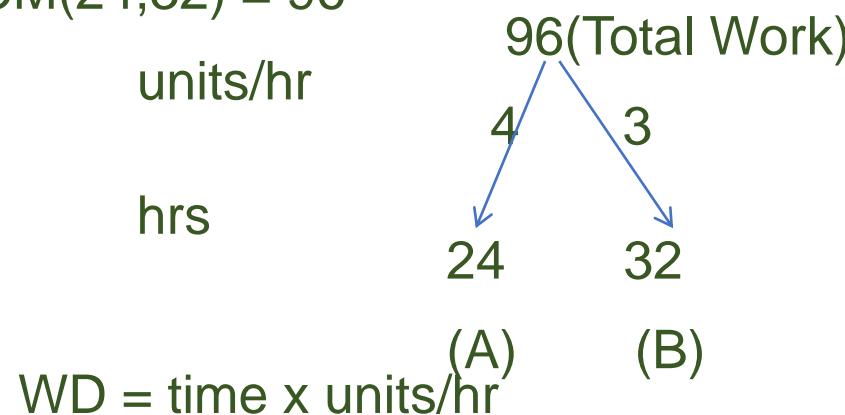
B. 4 min

C. 6 min

D.8 min

Soln:

$$\text{LCM}(24,32) = 96$$



$$\text{Work done by A alone} = 18 \times 4 = 72 \text{ units}$$

$$\text{Remaining work} = \text{Total units} - \text{work done by A} = 96 - 72 = 24 \text{ units}$$

$$\text{B should be closed after } = \frac{24}{3} = 8 \text{ mins.}$$

Ans : D



Pipes & Cisterns

Q. A pump can fill a tank with water in 2 hours. Because of a leak, it took $2 \frac{1}{3}$ hours to fill the tank. The leak can drain all the water of the tank in:

- A. $4 \frac{1}{3}$ hours B. 7 hours C. 8 hours D. 14 hours

- **Soln :**

- Work done = $\frac{XY}{Y-X}$ where, X = number of hrs to fill tank , Y = number of hrs to fill tank with leakage
- $2 \frac{1}{3} = \frac{7}{3}$
- Work done = $\frac{\frac{2}{3} \times \frac{7}{3}}{\frac{7}{3} - 2} = \frac{\frac{14}{9}}{\frac{1}{3}} = 14$
- Leak will empty the tank in 14 hours
- **Ans: D**



Pipes & Cisterns(Assignment)

Q. 12 buckets of water fill a tank when the capacity of each bucket is 13.5 litres. How many buckets will be needed to fill the same tank, if the capacity of each bucket is 9 litres?

- A. 8 B. 15 C. 16 D. 18

Ans: D

$$\begin{aligned}\text{Capacity of the tank} &= (12 \times 13.5) \text{ litre} \\ &= 162 \text{ litres}\end{aligned}$$

$$\text{Capacity of each bucket} = 9 \text{ litres}$$

$$\begin{aligned}\text{Number of buckets needed} &= 162 / 9 \\ &= 18 \text{ buckets}\end{aligned}$$



Pipes & Cisterns(Assignment)

Q. There are 3 pipes attached to a tank A, B & C. A alone can fill the tank in 60 min, B can fill the tank in 45 min & C can empty the full tank in 30 min. If all three pipes are opened together in how much time will the tank be full?

- A. 5 hrs
- B. 4 hrs
- C. 3 hrs
- D. 2 hrs

Ans: C



Pipes & Cisterns(Assignment)

Q. Two pipes A and B can fill a cistern in $37\frac{1}{2}$ minutes and 45 minutes respectively. Both pipes are opened. The cistern will be filled in just half an hour, if B is turned off after:

- A. 5 mins
- B. 9 mins
- C. 10 mins
- D. 15 mins

Ans : B



Pipes and Cisterns(Assignment)

Q. Two pipes A & B can fill the cistern in 20 min & 25 min respectively. Both are opened together but at the end of 5 min B is turned off. How much total time will the cistern take to fill up?

- A. 5 min
- B. 10 min
- C. 12 min
- D. 16 min

Ans: D



Pipes and Cisterns(Assignment)

Q. Two pipes A and B can fill a tank in 36 minutes and 45 minutes respectively. Another pipe C can empty the tank in 30 minutes. First A and B are opened. After 7 minutes, C is also opened. The tank is filled up in

- A. 39 minutes
- B. 46 minutes
- C. 40 minutes
- D. 45 minutes

Ans: B



Pipes and Cisterns(Assignment)

Q. Two pipes A and B can fill a tank in 15 minutes and 20 minutes respectively. Both the pipes are opened together but after 4 minutes, pipe A is turned off. What is the total time required to fill the tank?

- A. 10 min. 20 sec.
- B. 11 min. 45 sec.
- C. 12 min. 30 sec.
- D. 14 min. 40 sec.

Ans: D



Chain Rule

- In earlier problems the rate of doing work of each person or pipe varied.
- In chain rule problems all entities are of the same efficiency or work capacity.
- The entities may be men, women, tractors, engines, pumps, horses, lawn mowers etc.
- Work Done = No. of Men x Days x Hrs/day
- $W = M \times D \times H$
- $W_1 = M_1 \times D_1 \times H_1$, $W_2 = M_2 \times D_2 \times H_2$
- $$\frac{W_1}{W_2} = \frac{M_1 \times D_1 \times H_1}{M_2 \times D_2 \times H_2}$$



Chain Rule

Q. 18 men working for 5 hours per day can complete a job in 8 days. How many men working for 8 hours a day for 6 days will be required?

A. 24

B. 15

C. 16

D. 17

$$\text{Men} \times \text{Days} \times \text{Hrs/day} = \text{Work Done}$$

Case 1

$$18 \times 8 \times 5 = 720 \text{ man-hrs}$$

Case 2

$$M \times 6 \times 8 = 720 \text{ man-hrs}$$

$$M \times 6 \times 8 = 18 \times 8 \times 5$$

$$M = 15$$

Ans B



Chain Rule

Q. 36 men working for 12 hours a day can build a wall 45 mt long, 52 mt high & 63 mt broad in 91 days. In how many days will 80 men working for 9 hours a day build a wall 50 mt long, 72 mt high & 30 mt broad ?

- A. 24 days B. 35 days C. 40 days D. 47 days

Men x Days x Hrs/day = Work Done (Volume of Wall)

Case 1

$$36 \times 91 \times 12 = 45 \times 52 \times 63$$

Case 2

$$\frac{80 \times D \times 9}{36 \times 91 \times 12} = \frac{50 \times 72 \times 30}{45 \times 52 \times 63}$$

$$D = 40 \text{ days}$$

Ans C



Chain Rule

Q. 20 men or 40 women working for 9 hours a day can finish a work in 80 days. In how many days will 10 men & 10 women working together for 12 hours a day finish the work?

- A. 60 days B. 70 days C. 80 days D. 90 days

Men x Days x Hrs/day = Work Done

Also 20 Men = 40 Women \rightarrow 1M = 2 W(convert to one unit i.e. women or children)

20 men ---- 40 women

1men ----- ? (2women)

Case 1

$40W \times 80 \times 9$ = work

Case 2

$(20W + 10W) \times D \times 12$ = work

$30W \times D \times 12$ = $40W \times 80 \times 9$

D = 80 days

Ans C



Chain Rule

Q. 8 men or 12 women or 16 children working for 8 hours a day can finish a work in 52 days. In how many days will 1 man & 1 woman & 1 child working together for 8 hours a day finish the work?

- A. 180 days
- B. 192 days
- C. 216 days
- D. 164 days

• **Men x Days x Hrs/day** = Work Done

• Also 8 Men = 16 children $\rightarrow 1M = 2C$

• And 12 Women = 16 children $\rightarrow 1W = \frac{4}{3}C$

• **Case 1**

• $16C \times 52 \times 8$ = work

• **Case 2**

• $(2C + \frac{4}{3}C + C) \times D \times 8$ = work

• $(2C + \frac{4}{3}C + C) \times D \times 8 = 16C \times 52 \times 8$

• $13C/3 \times D \times 8 = 16C \times 52 \times 8$

• $D = 192$ days

Ans: B



Chain Rule(Assignment)

Q. 12 men and 16 boys can do a piece of work in 5 days. 13 men and 24 boys can do it in 4 days. The ratio of the daily work done by a man and a boy is –

- A. 2 : 1 B. 3 : 1 C. 3 : 2 D. 5 : 4

Soln:

$$W_1 = M_1 \times D_1 \quad \text{and} \quad W_2 = M_2 \times D_2$$

$$\begin{aligned} W_1 &= (12m+16b) \times 5 \\ &= 60m + 80b \end{aligned} \quad \begin{aligned} W_2 &= (13m+24b) \times 4 \\ &= 52m + 96b \end{aligned}$$

As , work done is same, equating both sides ,we get,

$$60m + 80b = 52m + 96b$$

$$60m - 52m = 96b - 80 b$$

$$8m = 16b$$

$$m = 2b \quad m : b = 2 : 1$$

Ans: A



Chain Rule(Assignment)

Q. 12 men & 18 women working together for 9 hours a day finish the work in 150 days.
30 men & 15 women working together for 10 hours a day finish the work in 81 days. In
how many days will 12 men & 12 women working together for 12 hours a day finish
the work?

A. 115 days B. 120 days C. 130 days D. 135 days

Ans: D



Chain Rule(Assignment)

Q. 24 workers working 8 hours a day can construct a wall in 5 days. In how many days can 45 workers working 4 hours a day construct 3 such walls?

- A. 18 days
- B. 16 days
- C. 4 days
- D. 7 days

Ans : B



Chain Rule(Assignment)

Q. 24 workers working 5 hours a day can construct a bungalow in 8 days. In how many days can 40 workers working 8 hours a day construct 2 such bungalows?

- A. 3 days
- B. 6 days
- C. 4 days
- D. 8 days

Ans : B



Chain Rule(Assignment)

Q. 32 painters working 5 hours a day can paint a building in 10 days. In how many days can 40 workers working 6 hours a day paint 3 such buildings?

- A. 10 days
- B. 16 days
- C. 20 days
- D. 28 days

Ans : C



Chain Rule(Assignment)

Q. 8 men or 12 women can construct a wall in 33 days . In how many days can 10men and 21 women construct the wall.

- A. 10 days
- B. 11 days
- C. 22 days
- D. 15 days

Ans : B



Chain Rule(Assignment)

Q. 12 men or 18 women can construct a wall in 33 days . In how many days can 20men and 24 women construct the wall.

- A. 10 days
- B. 11 days
- C. 22 days
- D. 15 days

Ans : B



Chain Rule(Assignment)

Q. 12 men can do a piece of work in 24 days. How many days are needed to complete the work, if 8 men do this work ?

- A. 28 days
- B. 36 days
- C. 48 days
- D. 52 days

Ans: B



Calendar

- In Non Leap year –
 - 365 days
 - $1 \text{ year} = 52 \text{ weeks} + 1 \text{ odd day(extra day)}$
 - 28th February
- In Leap year –
 - 366 days
 - $1 \text{ year} = 52 \text{ weeks} + 2 \text{ odd days}$
 - 29th February
- A **century leap year** is a **year** that is exactly divisible by 400
 - **years** 1600 and 2000 were **century leap years**; (400,800,1200,1600,2000 – century leap years till date)
 - **years** 1700, 1800, and 1900 were not **century leap years**.
- To find the day of a week on a given date we use the concept of “**odd days**”.
- 01/01/001 A.D(Anno Domini) was a Monday and 1st day of week so 1st January 0001 was a Monday.



Calendar

- In a century,
 - 24 leap year
 - 76 non leap years

$$\begin{array}{c} \text{100 years} \\ \text{Leap year} \quad \quad \quad \text{non leap year} \\ \downarrow \quad \quad \quad \downarrow \\ 24 \times 2 + 76 \times 1 \\ = \frac{48}{7} \quad \quad \quad = \frac{76}{7} \\ \downarrow \quad \quad \quad \downarrow \\ 6 \quad + \quad 6 \quad = 12 \div 7 = 5 \leftarrow \text{remainder} \end{array}$$

5 extra(odd) days in a century (100 years)

100 years = 5 odd days \leftarrow remainder

200 years = $10 \div 7 = 3$ odd days

300 years = $15 \div 7 = 1$ odd days

400 years = 0 odd days (as century leap year)



Calendar

Years	No. of odd
Ordinary year	1
Leap year	2
100 years	5
200 years	3
300 years	1
400 years	0



Calendar

Day of week	No. of odd
Sunday	0
Monday	1
Tuesday	2
Wednesday	3
Thursday	4
Friday	5
Saturday	6



Calendar

Month		Remainder
January	$31 \div 7$	3
February	$28 \div 7$ or $29 \div 7$	0(non leap) or 1(leap)
March	$31 \div 7$	3
April	$30 \div 7$	2
May	$31 \div 7$	3
June	$30 \div 7$	2
July	$31 \div 7$	3
August	$31 \div 7$	3
September	$30 \div 7$	2
October	$31 \div 7$	3
November	$30 \div 7$	2
December	$31 \div 7$	3



Calendar

Q. What was the day of the week on 15th August, 1947?

Soln:

Completed till 1946

1946

$$\frac{1900}{400} = 300 \quad \frac{46}{4} = 11 \text{ (quotient)}$$

$$1 \text{ odd day} \quad 46 + 11 = 57 \quad \frac{57}{7} = 1 \text{ (remainder)}$$

In 1946, odd days are,

1900 46

$$1 + 1 = 2 \text{ odd days}$$

1946 month date

$$\text{Total odd days} = 2 + 2 + 1 = 5 \text{ odd days}$$

As per table for days of a week , 5 \longleftrightarrow Friday

As month is August, go till July as per table,

J F M A M J J

$$3 + 0 + 3 + 2 + 3 + 2 + 3 = 16$$

$$\text{Now, } \frac{16}{7} = 2 \text{ (remainder)}$$

For date ,

$$\frac{15}{7} = 1 \text{ (remainder)}$$



Calendar

For Months -

J	F	M	A	M	J	J	A	S	O	N	D
0	3	3	6	1	4	6	2	5	0	3	5

For years -

1600 – 1699	6
1700 – 1799	4
1800 – 1899	2
1900 – 1999	0
2000 – 2099	6



Calendar

Q. What was the day of the week on 26th January, 1947?

Soln:

1. Last 2 digits of the year → 47
 2. Divide by 4 ($47 \div 4$) = 11(quotient)
 3. Take the date → 26
 4. Take the no. of month → 0 (from table)
 5. Take the no. of year → 0 (from table)
-
- 84 (add)
6. Divide by 7 → $\frac{84}{7} = 0$ (remainder)

Check table for day of the week

0 \longleftrightarrow Sunday



Calendar

Q. What was the day of the week on 29th February, 2012?

Soln:

1. Last 2 digits of the year → 12
2. Divide by 4 ($12 \div 4$) = 03 (quotient)
3. Take the date → 29
4. Take the no. of month → 03 (from table)
5. Take the no. of year → $\underline{06}$ (from table)
53 (add)
6. Divide by 7 → $\frac{53}{7} = 4$ (remainder) subtract 1 from remainder

In this case for all dates of **January & February** in a leap year , $4 - 1 = 3$

Check table for day of the week

3 \longleftrightarrow Wednesday



Calendar

Q. Today is Monday. Which day will be on 61st day?

Soln:

1 week = 7 days. Taking the multiple of 7

56 - Monday	or	63 - Monday
57 – Tuesday		62 - Sunday
58 – Wednesday		61 - Saturday
59 – Thursday		
60 – Friday		
61 - Saturday		
56 + 5 = 61 days		63 – 61 = 2 days
(add 5 days)	or	(subtract 2 days)



Calendar

Q. What dates of May 2002 did Monday fall on?

Soln:

Lets take date = 1st May 2002

1. Last 2 digits of the year → 02
 2. Divide by 4 ($02 \div 4$) = 00(quotient)
 3. Take the date → 01
 4. Take the no. of month → 01 (from table)
 5. Take the no. of year → 06 (from table)
 6. Divide by 7 → $\frac{10}{7} = 3$ (remainder)
- 10 (add)

Check table for day of the week

3 \longleftrightarrow Wednesday

1st May 2002 falls on Wednesday

1	2	3	4	5	6
W	Th	F	Sa	Su	M



first Monday

Now add 7 to it to find remaining Mondays

Dates on which Monday falls are -
6 , 13 , 20, 27



Calendar

Q. If we have preserved the calendar of 2017. Find the next immediate year in which we can reuse.

- A. 2027
- B. 2023
- C. 2025
- D. 2029

Soln:

$x/4$ (x = given year)

$$\frac{2017}{4} = 1 \text{ (remainder)}$$

For any year divide by 4, the possibility of remainder is 0,1,2,3

If remainder = 0 $\rightarrow x + 28$

If remainder = 1 $\rightarrow x + 6$

If remainder = 2/3 $\rightarrow x + 11$

$$\text{So, } \frac{2017}{4} = 1 \text{ (remainder)}$$

$$2017 + 6 = 2023$$

Ans: B



Calendar

Q. Which of the following days can never be the last day of a century?

- A. Sunday B. Monday C. Tuesday D. Wednesday

• **Soln:**

- The last day of century can be only
- 1 odd day(Monday)
- 3 odd days (Wednesday)
- 5 odd days (Friday)
- 7 or 0 odd days (Sunday)
- So, century can never end in **Tuesday , Thursday or Saturday.**

• **Ans: C**



Calendar

- Q. The day on 5th April of a year will be the same day on 5th of which month of the same year?
- A. 5th July B. 5th August C. 5th June D. 5th October

Ans A

- April & July for all years have the same calendar. So, a day on any date of April will be the same day on the corresponding date in July.
- The same day will fall on 5th July of the same year.



Calendar(Assignment)

Q. What was the day of the week on your birthdate?

Q. 13th October 2019 is a Sunday. Find the day on 13th October 1989?

- A. Sunday
- B. Monday
- C. Friday
- D. Wednesday

Ans: C

Q. 1st March 2006 falls on a Wednesday .What day does 1st March 2010 fall on?

- A. Tuesday
- B. Monday
- C. Friday
- D. Wednesday

Ans: B

Q. Today is Monday. Which day will be after 64 days?

- A. Tuesday
- B. Monday
- C. Friday
- D. Wednesday

Ans: A

Q. Today is Monday. After 30 days it will be?

- A. Tuesday
- B. Monday
- C. Friday
- D. Wednesday

B. Ans: D



Calendar(Assignment)

Q. 15th August 1947 was a Friday. Find the day on 15th August 1977?

- Soln:

$$\begin{array}{r} 1977 \\ - 1947 \\ \hline 30 \text{ years} \end{array}$$

Leap years between 1947 to 1977

1948	1964
1952	1968
1956	1972
1960	1976

} 8 years

$$30 + 8 = 38$$

total years leap

$$\frac{38}{7} = 3 \text{ (remainder)}$$

As 15th August 1947 was a Friday ,

So, Friday + 3 days = **Monday**



Calendar(Assignment)

Q. 4th January 2016 falls on Monday. What day of the week does 4th January 2017 lies?

- A. Wednesday
- B. Thursday
- C. Tuesday
- D. Monday

Soln:

Normal year = 1 odd day

Leap year = 2 odd days

$$\begin{array}{r} \text{Jan 4, 2016} \rightarrow \text{Monday} \\ \hline + \quad 2 \quad (\text{as leap year}) \end{array}$$

Jan 4, 2017 → Wednesday

Ans: A



Calendar(Assignment)

Q. Wednesday falls on 5th of a month .So which day will fall 5 days after 22nd of the same month?

- A. Tuesday
- B. Friday
- C. Thursday
- D. Wednesday

Ans: B

5th = Wednesday

+7

12th = Wednesday

+7

19th = Wednesday

22nd = Saturday

+5

27th = Thursday

5 days after 22nd will be **Friday**



Calendar(Assignment)

Q. On what dates of April, 2001 did Wednesday fall?

- A. 1st, 8th, 15th, 22nd, 29th
- B. 2nd, 9th, 16th, 23rd, 30th
- C. 3rd, 10th, 17th, 24th
- D. 4th, 11th, 18th, 25th

Ans: D



Calendar(Assignment)

Q. What is the day on 22 April 2222?

- A. Monday
- B. Tuesday
- C. Saturday
- D. Sunday

Ans: A



Calendar(Assignment)

Q. If 6th March, 2005 is Monday, what was the day of the week on 6th March, 2004?

- A. Sunday
- B. Saturday
- C. Tuesday
- D. Wednesday

Ans: A

The year 2004 is a leap year. So, it has 2 odd days.

But, Feb 2004 not included because we are calculating from March 2004 to March 2005. So it has 1 odd day only.

The day on 6th March, 2005 will be 1 day after the day on 6th March, 2004.

Given that, 6th March, 2005 is Monday.

6th March, 2004 is Sunday (1 day before to 6th March, 2005).



Calendar(Assignment)

Q. January 1, 2007 was Monday. What day of the week lies on Jan. 1, 2008?

- A. Monday
- B. Tuesday
- C. Wednesday
- D. Sunday

Ans: B





**THANK
YOU!**

