A boat covers 'X' km in 'T' hours while travelling downstream and it takes '2T' hours while travelling upstream. Which of the following can be possible value of T and X respectively if speed of stream is 10 km/hr?

A 4 hours, 120 km

B 5 hours, 160 km

C 4 hours, 180 km

D 4.5 hours, 190 km

E 4 hours, 160 km

Solution

Let the speed of boat be 'S' km/hr
According to question,
X/(S + 10) = T
X = ST + 10T.....(i)
X/(S - 10) = 2T
X = 2ST - 20T.....(ii)
ST + 10T = 2ST - 20T
ST = 30T
S = 30 km/hr
So, only option (e) has satisfied for the value of X and T.

Decide the combination of which rows of table I and II are sufficient to answer the question.

The perimeter of square field is __(1)__ m, and the area of a square field is __(2)__% of area of a rectangle field. If cost of ploughing of the rectangular field is Rs. __(3)__ per square meter, then what is the total cost of ploughing of rectangular field?

Table I	
COLUMN I	COLUMN II
a)	1)A 2)A/2
b)	2)10A + 3 3)A

Table II	
COLUMN I	COLUMN II
c)	3) 4.5
d)	Side of square = 24 m and Length and Breadth of the rectangle = 40 m and 30 m

A a, d

B b, c

C a, c

D b, d

E both (1) and (4)

Solution

Option (1): a, d

1) A

2) A/2

Side of square = 24 m and Length and Breadth of the rectangle = 40 m and 30 m

Perimeter of the square = A = 4 * 24 = 96 m

So, A/2 = 96/2 = 48

Area of square = 48% of Area of rectangle

=> 24 * 24 = 48/100 * Area of rectangle

=> Area of rectangle = 576 * 100/48 = 1200 m^2

Rate of cost of ploughing is not given. Hence, we cannot find the answer.

Option (2): b, c

2) (10A + 3)

3) A

And 3) 4.5

So, A = 4.5

So, (10A + 3)% = (10 * 4.5 + 3) = 48%

Here, side of square is not given. So, we cannot find the answer.

Option (3): a, c

1) A

2) A/2

And 3) 4.5

Here, value of A is not given. So, we cannot find the answer.

Option (4): b, d

2) (10A + 3)

3) A

Side of square = 24 m and Length and Breadth of the rectangle = 40 m and 30 m

Area of square = (10A + 3)% of Area of rectangle

=> 24 * 24 = (10A + 3)/100 * 40 * 30

=> 10A + 3 = 48

=> A = 4.5

Hence, total cost of ploughing = 40 * 30 * 4.5 = Rs. 5400

Directions : Study the data carefully and answer the following questions:

Below data is given regarding the number of cookies packets of three different flavours (Orange, peanut and almond) sold by a seller of three different companies (M, N and P). The ratio of number of orange cookies packets, peanut cookies packets and almond cookies packets sold by a seller of all three companies together are 8: 8: 9 respectively and the ratio of number of almond cookies packets sold by seller of Company M, Company N and Company P are 1: 2: 3 respectively.

Company M: The number of peanut cookies packets sold by seller of Company M is 31.25% of total Peanut cookies packets sold by seller of all three companies and the number of orange cookies packets sold by seller of Company M is equal to the number of almond cookies packets sold by seller of Company N.

Company N: The number of peanut cookies packets sold by seller of Company N is 40 more than the number of almond cookies packets sold by seller of Company N and the number of orange cookies packets sold by seller of Company M is 20 more than the number of orange cookies packets sold by seller of Company P.

Company P: The number of orange cookies packets sold by seller of Company N is 20 less than the number of peanut cookies packets sold by seller of Company M and the number of Peanut cookies packets sold by seller of Company P is 160.

If total revenue generated by the seller by selling orange cookies packets of company P and company N are Rs. 7700 and Rs. 4500, respectively, then what is the ratio of price per packet of orange cookies of company to that of company N?

A 7: 5

B 5: 4

C 4: 7

D 8: 9

E 7: 6

Let total number of orange, peanut and almond cookies packets sold by seller of all three companies are 8x, 8x and 9x respectively.
And number of almond cookies packets sold by seller of Company M, Company N and Company P are 3y, 2y and y respectively.
The number of peanut cookies packets sold by seller of Company M = 31.25% of 8x = 2.5x
The number of orange cookies packets sold by seller of Company M = 2y
The number of Almond cookies packets sold by seller of Company M = 3y
The number of peanut cookies packets sold by seller of Company N = (2y + 40)
The number of orange cookies packets sold by seller of Company N = 2.5x - 20
The number of Almond cookies packets sold by seller of Company N = 2y
The number of peanut cookies packets sold by seller of Company P = 160
The number of orange cookies packets sold by seller of Company P = (2y - 20)
The number of almond cookies packets sold by seller of Company P = y
Total number of almond cookies packets sold by seller of all three companies = 9x
=> 3y + 2y + y = 9x
=> 6y = 9x
=> y = 3x/2
=> y = 1.5x
And total number of peanut cookies packets sold by seller of all three companies = 8x
=> 2.5x + (2y + 40) + 160 = 8x
=> 2.5x + 2 * 1.5x + 200 = 8x
=> 2.5x = 200
=> x = 80
So, y = 1.5 * 80
=> y = 120

The total revenue generated by the seller by selling orange cookies packets of company P and company N are Rs. 7700 and Rs. 4500, respectively.
Total orange cookies packets of company P = 220
And total orange cookies packets of company N = 180
Hence, price per packet of orange cookies packets of company P = 7700/220 = 35
And price per packet of orange cookies packets of company N = 4500/180 = 25
So, required ratio = 35: 25 = 7: 5

Directions : Study the data carefully and answer the following questions:

Below data is given regarding the number of cookies packets of three different flavours (Orange, peanut and almond) sold by a seller of three different companies (M, N and P). The ratio of number of orange cookies packets, peanut cookies packets and almond cookies packets sold by a seller of all three companies together are 8: 8: 9 respectively and the ratio of number of almond cookies packets sold by seller of Company M, Company N and Company P are 1: 2: 3 respectively.

Company M: The number of peanut cookies packets sold by seller of Company M is 31.25% of total Peanut cookies packets sold by seller of all three companies and the number of orange cookies packets sold by seller of Company M is equal to the number of almond cookies packets sold by seller of Company N.

Company N: The number of peanut cookies packets sold by seller of Company N is 40 more than the number of almond cookies packets sold by seller of Company N and the number of orange cookies packets sold by seller of Company M is 20 more than the number of orange cookies packets sold by seller of Company P.

Company P: The number of orange cookies packets sold by seller of Company N is 20 less than the number of peanut cookies packets sold by seller of Company M and the number of Peanut cookies packets sold by seller of Company P is 160.

If total chocolate cookies packets of company M are sold 50% more than the total peanut cookies packets of company N, and total cocoa cookies packets of company M is sold 80% more than the total peanut cookies packets of company M, then how many chocolate and cocoa cookies packets of company M sold by the seller?

A 980

B 780

C 760

D 840

E 920

Solution

Let total number of orange, peanut and almond cookies packets sold by seller of all three companies are 8x, 8x and 9x respectively.
And number of almond cookies packets sold by seller of Company M, Company N and Company P are 3y, 2y and y respectively.
The number of peanut cookies packets sold by seller of Company M = 31.25% of 8x = 2.5x
The number of orange cookies packets sold by seller of Company M = 2y
The number of Almond cookies packets sold by seller of Company M = 3y
The number of peanut cookies packets sold by seller of Company N = (2y + 40)
The number of orange cookies packets sold by seller of Company N = 2.5x - 20
The number of Almond cookies packets sold by seller of Company N = 2y
The number of peanut cookies packets sold by seller of Company P = 160
The number of orange cookies packets sold by seller of Company P = (2y - 20)
The number of almond cookies packets sold by seller of Company P = y
Total number of almond cookies packets sold by seller of all three companies = 9x
=> 3y + 2y + y = 9x
=> 6y = 9x
=> y = 3x/2
=> y = 1.5x
And total number of peanut cookies packets sold by seller of all three companies = 8x
=> 2.5x + (2y + 40) + 160 = 8x
=> 2.5x + 2 * 1.5x + 200 = 8x
=> 2.5x = 200
=> x = 80
So, y = 1.5 * 80
=> y = 120

The total chocolate cookies packets of company M = 150/100 * 280 = 420
And total cocoa cookies packets of company M = 180/100 * 200 = 360
So, required total = 420 + 360 = 780

Directions : Study the data carefully and answer the following questions:

Below data is given regarding the number of cookies packets of three different flavours (Orange, peanut and almond) sold by a seller of three different companies (M, N and P). The ratio of number of orange cookies packets, peanut cookies packets and almond cookies packets sold by a seller of all three companies together are 8: 8: 9 respectively and the ratio of number of almond cookies packets sold by seller of Company M, Company N and Company P are 1: 2: 3 respectively.

Company M: The number of peanut cookies packets sold by seller of Company M is 31.25% of total Peanut cookies packets sold by seller of all three companies and the number of orange cookies packets sold by seller of Company M is equal to the number of almond cookies packets sold by seller of Company N.

Company N: The number of peanut cookies packets sold by seller of Company N is 40 more than the number of almond cookies packets sold by seller of Company N and the number of orange cookies packets sold by seller of Company M is 20 more than the number of orange cookies packets sold by seller of Company P.

Company P: The number of orange cookies packets sold by seller of Company N is 20 less than the number of peanut cookies packets sold by seller of Company M and the number of Peanut cookies packets sold by seller of Company P is 160.

Below table shows the price per packets of cookies, then what is the total revenue generated by seller by selling orange and Almond cookier of two companies M and N?

	M	N
Orange	Rs. 40	Rs. 25
Almond	Rs. 15	Rs. 30

A Rs. 23400

B Rs. 26700

C Rs. 32400

D Rs. 18450

E Rs. 22400

Solution

Let total number of orange, peanut and almond cookies packets sold by seller of all three companies are 8x, 8x and 9x respectively.
And number of almond cookies packets sold by seller of Company M, Company N and Company P are 3y, 2y and y respectively.
The number of peanut cookies packets sold by seller of Company M = 31.25% of 8x = 2.5x
The number of orange cookies packets sold by seller of Company M = 2y
The number of Almond cookies packets sold by seller of Company M = 3y
The number of peanut cookies packets sold by seller of Company N = (2y + 40)
The number of orange cookies packets sold by seller of Company N = 2.5x - 20
The number of Almond cookies packets sold by seller of Company N = 2y
The number of peanut cookies packets sold by seller of Company P = 160
The number of orange cookies packets sold by seller of Company P = (2y - 20)
The number of almond cookies packets sold by seller of Company P = y
Total number of almond cookies packets sold by seller of all three companies = 9x
=> 3y + 2y + y = 9x
=> 6y = 9x
=> y = 3x/2
=> y = 1.5x
And total number of peanut cookies packets sold by seller of all three companies = 8x
=> 2.5x + (2y + 40) + 160 = 8x
=> 2.5x + 2 * 1.5x + 200 = 8x
=> 2.5x = 200
=> x = 80
So, y = 1.5 * 80
=> y = 120

So, total revenue generated = 40 * 240 + 25 * 180 + 15 * 360 + 30 * 240 = Rs. 26700

Directions : Read the data carefully and answer the following questions:

Below table shows the percentage of sarees embroidered by factory M out of total sarees embroidered by four factories (M, N, O, and P) in five months, the percentage of sarees embroidered by factory N out of total sarees embroidered by four factories (M, N, O, and P) in five months, number of sarees embroidered by factory O in five months, and difference between the number of sarees embroidered by factory O and that of by factory P in five months:

	The percentage of sarees embroidered by factory M out of total sarees embroidered by four factories (M, N, O, and P)	The number of sarees embroidered by factory O	The percentage of sarees embroidered by factory N out of total sarees embroidered by four factories (M, N, O, and P)	The difference between the number of sarees embroidered by factory O and that of by factory P
June	30%	29400	25%	8400
July	25%	31500	20%	9100
August	28%	28000	24%	5600
September	30%	22400	25%	7000
October	35%	30800	25%	16800

Note- Number of sarees embroidered by factory O is more than the number of sarees embroidered by factory P.

If number of defected sarees embroidered by factory N in July and September are 20% and 25% of the total embroidered sarees by factory N in July and September, respectively, then what is the total number of defected sarees embroidered by factory N in July and September?

A 9110

B 9230

C 9170

D 9780

E 9850

Solution

Number of sarees embroidered by factory O in June = 29400
Number of sarees embroidered by factory P in June = 29400 - 8400 = 21000
Number of sarees embroidered by factory M in June = (29400 + 21000) * 30/(100 - 30 - 25) = 33600
Number of sarees embroidered by factory N in June = (29400 + 21000) * 25/(100 - 30 - 25) = 28000
Similarly, calculating the remaining data:

	M	N	O	P
June	33600	28000	29400	21000
July	24500	19600	31500	22400
August	29400	25200	28000	22400
September	25200	21000	22400	15400
October	39200	28000	30800	14000

The number of defected sarees embroidered by factory N in July and September = 19600 * 20/100 + 21000 * 25/100 = 9170

Directions : Read the data carefully and answer the following questions:

Below table shows the percentage of sarees embroidered by factory M out of total sarees embroidered by four factories (M, N, O, and P) in five months, the percentage of sarees embroidered by factory N out of total sarees embroidered by four factories (M, N, O, and P) in five months, number of sarees embroidered by factory O in five months, and difference between the number of sarees embroidered by factory O and that of by factory P in five months:

	The percentage of sarees embroidered by factory M out of total sarees embroidered by four factories (M, N, O, and P)	The number of sarees embroidered by factory O	The percentage of sarees embroidered by factory N out of total sarees embroidered by four factories (M, N, O, and P)	The difference between the number of sarees embroidered by factory O and that of by factory P
June	30%	29400	25%	8400
July	25%	31500	20%	9100
August	28%	28000	24%	5600
September	30%	22400	25%	7000
October	35%	30800	25%	16800

Note- Number of sarees embroidered by factory O is more than the number of sarees embroidered by factory P.

The number of sarees embroidered by factory P in July and August together is approximately what percentage more or less than the number of sarees embroidered by factory M in June and September together?

A 89.2%

B 12.6%

C 23.8%

D 56.3%

E 49.3%

Solution

Solution

Number of sarees embroidered by factory O in June = 29400
Number of sarees embroidered by factory P in June = 29400 - 8400 = 21000
Number of sarees embroidered by factory M in June = (29400 + 21000) * 30/(100 - 30 - 25) = 33600
Number of sarees embroidered by factory N in June = (29400 + 21000) * 25/(100 - 30 - 25) = 28000
Similarly, calculating the remaining data:

	M	N	O	P
June	33600	28000	29400	21000
July	24500	19600	31500	22400
August	29400	25200	28000	22400
September	25200	21000	22400	15400
October	39200	28000	30800	14000

The number of sarees embroidered by factory P in July and August together = 22400 + 22400 = 44800
The number of sarees embroidered by factory M in June and September together = 33600 + 25200 = 58800
So, required percentage = (58800 - 44800)/ 58800 * 100 = 23.80%

Directions : Read the data carefully and answer the following questions:

Below table shows the percentage of sarees embroidered by factory M out of total sarees embroidered by four factories (M, N, O, and P) in five months, the percentage of sarees embroidered by factory N out of total sarees embroidered by four factories (M, N, O, and P) in five months, number of sarees embroidered by factory O in five months, and difference between the number of sarees embroidered by factory O and that of by factory P in five months:

	The percentage of sarees embroidered by factory M out of total sarees embroidered by four factories (M, N, O, and P)	The number of sarees embroidered by factory O	The percentage of sarees embroidered by factory N out of total sarees embroidered by four factories (M, N, O, and P)	The difference between the number of sarees embroidered by factory O and that of by factory P
June	30%	29400	25%	8400
July	25%	31500	20%	9100
August	28%	28000	24%	5600
September	30%	22400	25%	7000
October	35%	30800	25%	16800

Note- Number of sarees embroidered by factory O is more than the number of sarees embroidered by factory P.

If number of sarees embroidered by factory M in November and December are 25% and 40% more than in previous month respectively, then what is the total number of sarees embroidered by factory M in November and December together?

A 117200

B 117400

C 117600

D 117800

E 117000

Solution

Solution

Number of sarees embroidered by factory O in June = 29400
Number of sarees embroidered by factory P in June = 29400 - 8400 = 21000
Number of sarees embroidered by factory M in June = (29400 + 21000) * 30/(100 - 30 - 25) = 33600
Number of sarees embroidered by factory N in June = (29400 + 21000) * 25/(100 - 30 - 25) = 28000
Similarly, calculating the remaining data:

	M	N	O	P
June	33600	28000	29400	21000
July	24500	19600	31500	22400
August	29400	25200	28000	22400
September	25200	21000	22400	15400
October	39200	28000	30800	14000

The number of sarees embroidered by factory M in November = 39200 * 125/100 = 49000
The number of sarees embroidered by factory M in December = 49000 * 140/100 = 68600
So, required total = 68600 + 49000 = 117600

Directions : Read the data carefully and answer the following questions:

Below table shows the percentage of sarees embroidered by factory M out of total sarees embroidered by four factories (M, N, O, and P) in five months, the percentage of sarees embroidered by factory N out of total sarees embroidered by four factories (M, N, O, and P) in five months, number of sarees embroidered by factory O in five months, and difference between the number of sarees embroidered by factory O and that of by factory P in five months:

	The percentage of sarees embroidered by factory M out of total sarees embroidered by four factories (M, N, O, and P)	The number of sarees embroidered by factory O	The percentage of sarees embroidered by factory N out of total sarees embroidered by four factories (M, N, O, and P)	The difference between the number of sarees embroidered by factory O and that of by factory P
June	30%	29400	25%	8400
July	25%	31500	20%	9100
August	28%	28000	24%	5600
September	30%	22400	25%	7000
October	35%	30800	25%	16800

Note- Number of sarees embroidered by factory O is more than the number of sarees embroidered by factory P.

If number of sarees embroidered by factory P in June and August are 25% and 60% less than that of by factory Q in same months, respectively, then what is total number of sarees embroidered by factory Q in June and August?

A 84000 ✓

B 81000

C 90000

D 98000 ✗

E 91000

Solution

Solution

Number of sarees embroidered by factory O in June = 29400
Number of sarees embroidered by factory P in June = 29400 - 8400 = 21000
Number of sarees embroidered by factory M in June = (29400 + 21000) * 30/(100 - 30 - 25) = 33600
Number of sarees embroidered by factory N in June = (29400 + 21000) * 25/(100 - 30 - 25) = 28000
Similarly, calculating the remaining data:

	M	N	O	P
June	33600	28000	29400	21000
July	24500	19600	31500	22400
August	29400	25200	28000	22400
September	25200	21000	22400	15400
October	39200	28000	30800	14000

The number of sarees embroidered by factory Q in June and August = 21000 * 100/75 + 22400 * 100/40 = 84000

Three persons P, Q and R started a business with their initial capital in the ratio of (1/9): (1/6): (1/8). After 'x' years, P increases his capital by 37.5% and after 'y' years from the start of the business, R increases his capital by 133(1/3)%. At the end of a year, respective ratio of their profit share is 10: 12: 15, then what is the sum of value of 'x' and 'y'?

A 12

B 8

C 6

D 10

E None of these

Solution

Ratio of initial capital of P, Q and R = (1/9): (1/6): (1/8) = 8: 12: 9

Let initial capital of P, Q and R are 8a, 12a and 9a respectively.

Increased capital of P = 137.5% of 8a = 11a

Increased capital of R = 233(1/3)% of 9a = 21a

Total weightage of P in the profit = (8a * x) + [11a * (12 - x)] = (132 - 3x)a

Total weightage of Q in the profit = 12a * 12 = 144a

Total weightage of R in the profit = (9a * y) + [21a * (12 - y)] = (252 - 12y)a

Ratio of their profit = (132 - 3x)a: 144a: (252 - 12y)a = 10: 12: 15

(132 - 3x): 144: (252 - 12y) = 10: 12: 15

(132 - 3x): 144 = 10: 12

132 - 3x = 120

x = 4

144: (252 - 12y) = 12: 15

252 - 12y = 180

y = 6

Required sum = x + y = 4 + 6 = 10

In each of the following questions, each question is followed by two statements. Read all the statements carefully and find that which of the following statement(s) is/are sufficient to answer the question.

Four packet of buttons P, Q, R and S contain A, B, C and D respectively number of buttons and are placed according to number of buttons in ascending order. The median of A, B and C is 12 and the median of A, B, C and D is 16. Find the mean of C and D.

Statement I: If 9 buttons from S are taken out and placed into Q, then number of buttons in both the packets become equal.

Statement II: If 5 buttons from S are taken out and placed into R, then number of buttons in both the packets become equal.

A Statement I alone is sufficient.

B Statement II alone is sufficient.

C Either statement I or II alone is sufficient.

D Both statements I and II together are sufficient.

E Both statements I and II together are not sufficient.

Solution

Arrangement of buttons:

$A < B < C < D$

Median of A, B and C = B = 12

Median od A, B, C and D = (B + C)/2 = 16

12 + C = 32

C = 20

From statement I:

D - 9 = B + 9

D = 12 + 18 = 30

Mean of C and D = (C + D)/2 = (20 + 30)/2 = 25

Hence, this statement alone is sufficient.

From statement II:

D - 5 = C + 5

D = 20 + 10 = 30

Mean of C and D = (C + D)/2 = (20 + 30)/2 = 25

Hence, this statement alone is sufficient.

Given below is the sequence of series. Analyze the pattern of the series and answer the given following questions.

1, 23, 289, 3771, 52809.

__, m, __, __, 28785

What is the value of 'm' in the given series?

A 8

B 7

C 6

D 5

E None of these

Solution

The logic in the first series is:
1 x 11 + 12 = 23
23 x 12 + 13 = 289
289 x 13 + 14 = 3771
3771 x 14 + 15 = 52809
Second series would be as given below:
(28785 - 15)/14 = 2055
(2055 - 14)/13 = 157
(157 - 13)/12 = 12
(12 - 12)/11 = 0
Therefore, m = 12

The upstream speed of boat is 24 km/h. The boat can travel P km in Q hours while traveling upstream and 144 km in Q hours while travelling downstream. The time taken by the boat to travel 216 km upstream is R hours more than that while travelling the same distance in downstream. Find the ratio between the speed of the boat and the speed of the stream.

Which of the following statement is/are sufficient to answer the above question?

(I) The number of hours taken by the boat to cover (P * P) km distance in upstream is 384 hours.

(II) $P - Q^3 + R^3 > 59$

A Only statement I alone is sufficient

B Only statement II alone is sufficient

C Both statement I and II together are sufficient

D Either statement I or II alone is sufficient

E Both statement I and II together are not sufficient

Solution

Upstream speed of the boat = 24 km/h

=> P/Q = 24

And Downstream speed of the boat = 144/Q km/h

And 216/24 = R + 216/(144/Q)

=> 9 = R + 1.5Q

From statement I:

(P * P)/24 = 384

=> P = √(384 * 24)

=> P = 96

Thus, Q = 96/24 = 4

Hence, Downstream speed = 144/4 = 36 km/h

Therefore, ratio between the speed of the boat and the speed of the stream = (36 + 24)/2: (36 - 24)/2 = 5: 1

Thus, statement I alone is sufficient to answer the question,

From statement II:

$P - Q^3 + R^3 > 59$

From this data we cannot find the answer.

Which of the following value will fill the blank in the same order?

A vessel contains 180 litres of milk and 80 litres of water in it. If ____litres of the mixture is taken out from the vessel and ____litres of milk is added to the remaining mixture, then the quantity of water in the vessel now becomes $66\frac{2}{3}$ % less than the final quantity of milk in the vessel.

(A) 26, 56

(B) 52, 48

(C) 78, 44

(D) 65, 45

A Only A and C

B Only B and D

C All A, B, C and D

D Only D

E Only A and B

Solution

Ratio of milk to water in the vessel = 180:80 = 9:4
Let 't' litres of the mixture is taken out from the vessel.
Then, amount of water in 't' litres of the mixture = (4/13) x t
And, amount of milk in 't' litres of the mixture = (9/13) x t

Hence, quantity of milk in the remaining mixture = $180 - \left(\frac{9}{13} xt\right)$

Quantity of water in the remaining mixture = $80 - \left(\frac{4}{13} xt\right)$
Let 'y' litres of milk is added to the remaining mixture.

Final quantity of milk in the vessel = $180 - \left(\frac{9}{13} xt\right) + y$

Final quantity of water in the vessel = $80 - \left(\frac{4}{13} xt\right)$
According to the question:

$$\Rightarrow \frac{180 - \left(\frac{9}{13} xt\right) + y}{80 - \left(\frac{4}{13} xt\right)} = \frac{3}{1}$$

$\Rightarrow 180 + y - \frac{9}{13} t = 240 - \frac{12}{13} t$

$\Rightarrow \frac{3}{13} t + y = 60$ -----(1)

From (A)
=> Putting the value of t = 26 and y = 56 in Left hand side of equation (1), we get:

$\Rightarrow \frac{3}{13} \times 26 + 56$

=> (6 + 56)
=> 62 ≠ Right hand side of equation (1)
Since, Left hand side ≠ Right hand side
Hence, it did not satisfy

From (B)

=> Putting the value of t = 52 and y = 48 in Left hand side of equation (1), we get:

$$\Rightarrow \frac{3}{13} \times 52 + 48$$

=> (12 + 48)

=> 60 = Right hand side of equation (1)

Since, Left hand side = Right hand side

Hence, it satisfied.

From (C)

=> Putting the value of t = 78 and y = 44 in Left hand side of equation (1), we get:

$$\Rightarrow \frac{3}{13} \times 78 + 44$$

=> (18 + 44)

=> 62 ≠ Right hand side of equation (1)

Since, Left hand side ≠ Right hand side

Hence, it did not satisfy.

From (D)

=> Putting the value of t = 65 and y = 45 in Left hand side of equation (1), we get:

$$\Rightarrow \frac{3}{13} \times 65 + 45$$

=> (15 + 45)

=> 60 = Right hand side of equation (1)

Since, Left hand side = Right hand side

Hence, it satisfied.

An item is purchased at P sold at Q at R% profit if it purchased at (P + 100) and sold at Q at (R/2)% profit and also if it is purchased at (P + 200) and sold at Q after (R/5)% profit.

(A) Value of P

(B) Value of Q.

(C) Value of R.

(D) Profit amount if the article is sold at Rs.450.

A All A, B, C and D

B Only A

C Only C

D Only A and B

E Only A and C

Solution

According to question-

Case 1:

SP of item = (100 + R)% of P = Q ..... (1)

Case 2:

SP of item = (100 + R/2)% of (P + 100) = Q ..... (2)

Case 3:

SP of item = (100 + R/5)% of (P + 200) = Q ..... (3)

From (1) and (2)-

P(100 + R) = (P + 100)(100 + R/2)

R[0.5P - 50] = 10000 ..... (4)

From (1) and (3)-

P(100 + R) = (P + 200)(100 + R/5)

R[0.8P - 40] = 20000 ..... (5)

From (4) and (5)-

P - 100 = 0.8P - 40

P = Rs.300

From equation (4)-

R[150 - 50] = 10000

R = Rs.100

From equation (1)-

Q = (100 + 100)% of 300

Q = Rs.600

Profit amount if the article is sold at Rs.450 = 450 - P = Rs.150

Study the information given below and answer the question that follows:

In a certain code language,

'A **$** B' means 'A is not greater than B.'

'A **@** B' means 'A is neither greater than nor equals to B.'

'A **%** B' means 'A is neither smaller than nor equals to B.'

'A **&** B' means 'A is not smaller than B.'

'A **#** B' means 'A is neither greater than nor smaller than B.'

In the statement P **$** T **@** Q **#** R **%** V **&** O which of the following codes should be interchanged so that the conclusion R **%** P holds definitely true?

A @ and &

B % and $

C @ and $

D % and @

E Both (b) and (c)

Solution

It is given that,
'A **$** B' means 'A is not greater than B.' means A ≤ B.
'A **@** B' means 'A is neither greater than nor equals to B.' means A < B.
'A **%** B' means 'A is neither smaller than nor equals to B.' means A > B.
'A **&** B' means 'A is not smaller than B.' means A ≥ B.
'A **#** B' means 'A is nether greater than nor smaller than B.' means A = B.
Also, R % P means R > P.
Option (a) @ and &
So, statement will be: P **$** T **&** Q **#** R **%** V **@** O
After decoding we get: P ≤ T ≥ Q = R > V < O
Here, the definite relationship between R and P cannot be determined. So, option (a) is incorrect.
Option (b) % and $
So, statement will be: P **%** T **@** Q **#** R **$** V **&** O
After decoding we get: P > T < Q = R ≤ V ≥ O
Here, the definite relationship between R and P cannot be determined. So, option (b) is incorrect.
Option (c) @ and $
So, statement will be: P **@** T **$** Q **#** R **%** V **&** O
After decoding we get: P < T ≤ Q = R > V ≥ O
Here, R > P.
Option (d) % and @
So, statement will be: P **$** T **%** Q **#** R **@** V **&** O
After decoding we get: P ≤ T > Q = R < V ≥ O
Here, the definite relationship between R and P cannot be determined. So, option (d) is incorrect.

Directions : Study the following information and answer the given questions.

1 ** 2 means 1 is the daughter-in-law of 2.

1 @@ 2 means 1 is the husband of 2.

1 && 2 means 1 is sister of 2.

1 ~ ~ 2 means 2 is younger to 1.

1 ¥¥ 2 means 1 is the child of 2.

1 %% 2 means 1 is the brother-in-law of 2.

1 ®® 2 means 1 is elder to 2.

The relations of a family are given below -

Romi @@ Suman ** Monu && Kunal %% Javed;

Monu ¥¥ Chirag @@ Gauri;

Gauri ®® Kunal ~ ~ Romi;

How Javed is related to Suman?

A Javed is the father-in-law of Suman

B Javed is the brother-in-law of Suman.

C Javed is the nephew of Suman

D Javed is the son-in-law of Suman.

E Javed is the grandfather of Suman.

Solution

Solution

Common solution:

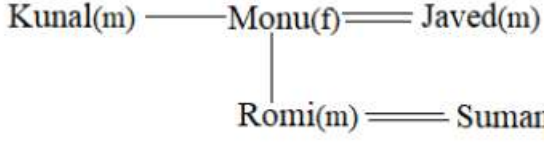
Romi @@ Suman ** Monu && Kunal %% Javed

Romi @@ Suman means Romi is husband of Suman.

Suman ** Monu means Suman is daughter-in-law of Monu.

Monu && Kunal means Monu is sister of Kunal.

Kunal %% Javed means Kunal is the brother-in-law of Javed.



Monu ¥¥ Chirag @@ Gauri;

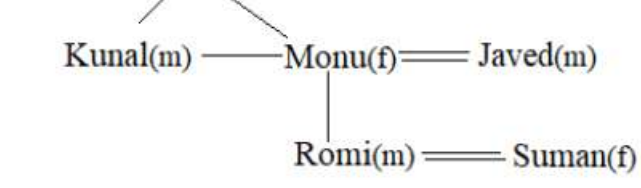
Monu ¥¥ Chirag means Monu is the child of Chirag.

Chirag @@ Gauri means Chirag is the husband of Gauri.

Gauri ®® Kunal ~ ~ Romi

Kunal ~ ~ Romi means Romi is younger to Kunal.

Gauri ®® Kunal means Gauri is elder to Kunal.



This is the final arrangement.

Javed is the father-in-law of Suman.

Directions : Study the following information and answer the given questions.

1 ** 2 means 1 is the daughter-in-law of 2.

1 @@ 2 means 1 is the husband of 2.

1 && 2 means 1 is sister of 2.

1 ~ ~ 2 means 2 is younger to 1.

1 ¥¥ 2 means 1 is the child of 2.

1 %% 2 means 1 is the brother-in-law of 2.

1 ®® 2 means 1 is elder to 2.

The relations of a family are given below -

Romi @@ Suman ** Monu && Kunal %% Javed;

Monu ¥¥ Chirag @@ Gauri;

Gauri ®® Kunal ~ ~ Romi;

If the age of Gauri is 56 and the age of Romi is 32, what is the possible age of Kunal?

A 21

B 62

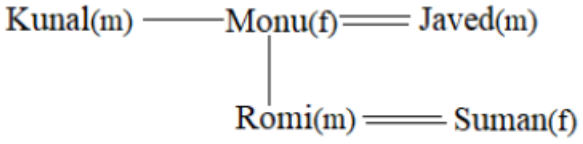
C 18

D 45

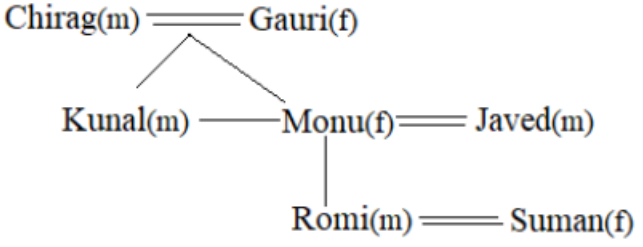
E 30

Solution

Common solution:
Romi @@ Suman ** Monu && Kunal %% Javed
Romi @@ Suman means Romi is husband of Suman.
Suman ** Monu means Suman is daughter-in-law of Monu.
Monu && Kunal means Monu is sister of Kunal.
Kunal %% Javed means Kunal is the brother-in-law of Javed.



Monu ¥¥ Chirag @@ Gauri;
Monu ¥¥ Chirag means Monu is the child of Chirag.
Chirag @@ Gauri means Chirag is the husband of Gauri.
Gauri ®® Kunal ~ ~ Romi
Kunal ~ ~ Romi means Romi is younger to Kunal.
Gauri ®® Kunal means Gauri is elder to Kunal.



This is the final arrangement.

Gauri ®® Kunal ~ ~ Romi
Kunal ~ ~ Romi means Romi is younger to Kunal.
Gauri ®® Kunal means Gauri is elder to Kunal.
The age of Kunal is between the age of Romi and Gauri i.e., between 32 and 56.
Thus, the age of Kunal must be 45.

Directions : There are 48 students sitting in a class in such a way, that all facing north. Out of which girls and boys are in a ratio 1:2. They all are sitting in 12 rows, each row contains 4 students. So there will be four queues. All the students are sitting in such a formation that the row which is at the bottom is numbered as row 1, next is row 2 and row which is at the top is numbered as 12. All boys are arranged in a manner that there are Four boys sitting consecutively in top four rows and Four are sitting consecutively at the bottom four rows in all four queues whereas the middle four rows are occupied by all the girls in all four queues.

Ashu, who is a boy, is sitting in row 2 and nobody sits to the left of Ashu. Except John, all other friends of Manvi are girls. Payal is sitting to immediate right of Charu and immediate left of Alisha in the same row. Only three students are sitting between John and the one who is immediate left of Payal in a queue. Three students sit to the left of Yukti, who is a girl and she is sitting immediately behind Surya. Two students sit between Yukti and Alisha in a queue. Only two students are ahead of Jack in a queue. Two students are sitting between Tom and Manvi in a queue. Alisha is the only daughter of her parents. There are three students in a queue between Ashu and Manvi. Jack is one place ahead to the one who is second to right (in the same row) of his friend Tom. Surya is the brother of Payal. John is sitting ahead of Charu.

In which row Yukti is sitting?

A 7th

B 5th

C 8th

D 9th

E None of the above

Solution

· There are 48 students sitting in a class in such a way that they all facing north. Out of which girls and boys are in a ratio 1:2. So, Girls=16, Boys =32. They all are sitting in 12 rows; each row contains 4 students so there will be 4 queues. All the students are sitting in such a formation that the row which is at bottom is numbered as row 1, next is row 2 and row which is at top is numbered as 12. All the boys are arranged in a manner that there are four boys sitting consecutively in top four rows and four are sitting consecutively at the bottom four rows in all four queues whereas the middle four rows are occupied by all the girls in all four queues. So, the formation will be, Where, (F) represents girls and (M) represents boys sitting in a row.

ROW 12	(M)	(M)	(M)	(M)
ROW 11	(M)	(M)	(M)	(M)
ROW 10	(M)	(M)	(M)	(M)
ROW 9	(M)	(M)	(M)	(M)
ROW 8	(F)	(F)	(F)	(F)
ROW 7	(F)	(F)	(F)	(F)
ROW 6	(F)	(F)	(F)	(F)
ROW 5	(F)	(F)	(F)	(F)
ROW 4	(M)	(M)	(M)	(M)
ROW 3	(M)	(M)	(M)	(M)
ROW 2	(M)	(M)	(M)	(M)
ROW 1	(M)	(M)	(M)	(M)

· Ashu, who is a boy, is sitting in row 2 and nobody sits to the left of Ashu. It means that Ashu's position will be in Row-2 and is sitting in a queue which is at extreme left end. There are three students in a queue between Ashu and Manvi. So, Manvi is sitting in Row-6 in a same queue as Ashu. Only two students are ahead of Jack in a queue and two students are sitting between Tom and Manvi in a queue, which means that Tom is sitting in row-9 and he is a boy.

ROW 12	(M)	(M)	(M)	(M)
ROW 11	(M)	(M)	(M)	(M)
ROW 10	(M)	(M)	(M)	(M)
ROW 9	Tom(M)	(M)	(M)	(M)
ROW 8	(F)	(F)	(F)	(F)
ROW 7	(F)	(F)	(F)	(F)
ROW 6	Manvi(F)	(F)	(F)	(F)
ROW 5	(F)	(F)	(F)	(F)
ROW 4	(M)	(M)	(M)	(M)
ROW 3	(M)	(M)	(M)	(M)
ROW 2	Ashu(M)	(M)	(M)	(M)
ROW 1	(M)	(M)	(M)	(M)

· Three students sit to the left of Yukti, who is a girl and she is sitting immediately behind Surya. Surya is the brother of Payal. So it is clear that Yukti is a girl and Surya is a boy and only three persons are sitting to the left of Yukti, also Surya will sit immediate ahead of Yukti. So, only one place for Yukti i.e. she will sit in Row-8 and in a queue which is at extreme right end and Surya will sit in row-9.

ROW 12	(M)	(M)	(M)	(M)
ROW 11	(M)	(M)	(M)	(M)
ROW 10	(M)	(M)	(M)	(M)
ROW 9	Tom(M)	(M)	(M)	Surya(M)
ROW 8	(F)	(F)	(F)	Yukti(F)
ROW 7	(F)	(F)	(F)	(F)
ROW 6	Manvi(F)	(F)	(F)	(F)
ROW 5	(F)	(F)	(F)	(F)
ROW 4	(M)	(M)	(M)	(M)
ROW 3	(M)	(M)	(M)	(M)
ROW 2	Ashu(M)	(M)	(M)	(M)
ROW 1	(M)	(M)	(M)	(M)

· Two students sit between Yukti and Alisha in a queue. Alisha is the only daughter of her parents. So it is clear that Alisha is a girl and she will sit in Row-5. Payal is sitting to immediate right of Charu and immediate left of Alisha in the same row which means that three of them will sit in Row-5 and all three are girls. Only three students are sitting between John and the one who is immediate left of Payal in a queue. John is sitting ahead of Charu. Except John, all other friends of Manvi are girls. Now, from above condition it is clear that Charu is sitting immediate left of Payal and John is a boy and John is sitting ahead of Charu so John will sit in Row-9 in same queue as Charu.

ROW 12	(M)	(M)	(M)	(M)
ROW 11	(M)	(M)	(M)	(M)
ROW 10	(M)	(M)	(M)	(M)
ROW 9	Tom(M)	John(M)	(M)	Surya(M)
ROW 8	(F)	(F)	(F)	Yukti(F)
ROW 7	(F)	(F)	(F)	(F)
ROW 6	Manvi(F)	(F)	(F)	(F)
ROW 5	(F)	Charu(F)	Payal(F)	Alisha(F)
ROW 4	(M)	(M)	(M)	(M)
ROW 3	(M)	(M)	(M)	(M)
ROW 2	Ashu(M)	(M)	(M)	(M)
ROW 1	(M)	(M)	(M)	(M)

· Jack is one place ahead to the one who is second to right (in the same row) of his friend Tom, which means Jack is a boy and sitting in Row-10 and in same queue as Payal.

ROW 12	(M)	(M)	(M)	(M)
ROW 11	(M)	(M)	(M)	(M)
ROW 10	(M)	(M)	Jack(M)	(M)
ROW 9	Tom(M)	John(M)	(M)	Surya(M)
ROW 8	(F)	(F)	(F)	Yukti(F)
ROW 7	(F)	(F)	(F)	(F)
ROW 6	Manvi(F)	(F)	(F)	(F)
ROW 5	(F)	Charu(F)	Payal(F)	Alisha(F)
ROW 4	(M)	(M)	(M)	(M)
ROW 3	(M)	(M)	(M)	(M)
ROW 2	Ashu(M)	(M)	(M)	(M)
ROW 1	(M)	(M)	(M)	(M)

Finally, we get,

ROW 12	(M)	(M)	(M)	(M)
ROW 11	(M)	(M)	(M)	(M)
ROW 10	(M)	(M)	Jack(M)	(M)
ROW 9	Tom(M)	John(M)	(M)	Surya(M)
ROW 8	(F)	(F)	(F)	Yukti(F)
ROW 7	(F)	(F)	(F)	(F)
ROW 6	Manvi(F)	(F)	(F)	(F)
ROW 5	(F)	Charu(F)	Payal(F)	Alisha(F)
ROW 4	(M)	(M)	(M)	(M)
ROW 3	(M)	(M)	(M)	(M)
ROW 2	Ashu(M)	(M)	(M)	(M)
ROW 1	(M)	(M)	(M)	(M)

Yukti is sitting in 8^{th} row.

Directions : There are 48 students sitting in a class in such a way, that all facing north. Out of which girls and boys are in a ratio 1:2. They all are sitting in 12 rows, each row contains 4 students. So there will be four queues. All the students are sitting in such a formation that the row which is at the bottom is numbered as row 1, next is row 2 and row which is at the top is numbered as 12. All boys are arranged in a manner that there are Four boys sitting consecutively in top four rows and Four are sitting consecutively at the bottom four rows in all four queues whereas the middle four rows are occupied by all the girls in all four queues.

Ashu, who is a boy, is sitting in row 2 and nobody sits to the left of Ashu. Except John, all other friends of Manvi are girls. Payal is sitting to immediate right of Charu and immediate left of Alisha in the same row. Only three students are sitting between John and the one who is immediate left of Payal in a queue. Three students sit to the left of Yukti, who is a girl and she is sitting immediately behind Surya. Two students sit between Yukti and Alisha in a queue. Only two students are ahead of Jack in a queue. Two students are sitting between Tom and Manvi in a queue. Alisha is the only daughter of her parents. There are three students in a queue between Ashu and Manvi. Jack is one place ahead to the one who is second to right (in the same row) of his friend Tom. Surya is the brother of Payal. John is sitting ahead of Charu.

What is the position of Payal from the front end in her queue?

A 7th

B 8th

C 5th

D 9th

E None of the above

Directions : There are 48 students sitting in a class in such a way, that all facing north. Out of which girls and boys are in a ratio 1:2. They all are sitting in 12 rows, each row contains 4 students. So there will be four queues. All the students are sitting in such a formation that the row which is at the bottom is numbered as row 1, next is row 2 and row which is at the top is numbered as 12. All boys are arranged in a manner that there are Four boys sitting consecutively in top four rows and Four are sitting consecutively at the bottom four rows in all four queues whereas the middle four rows are occupied by all the girls in all four queues.

Ashu, who is a boy, is sitting in row 2 and nobody sits to the left of Ashu. Except John, all other friends of Manvi are girls. Payal is sitting to immediate right of Charu and immediate left of Alisha in the same row. Only three students are sitting between John and the one who is immediate left of Payal in a queue. Three students sit to the left of Yukti, who is a girl and she is sitting immediately behind Surya. Two students sit between Yukti and Alisha in a queue. Only two students are ahead of Jack in a queue. Two students are sitting between Tom and Manvi in a queue. Alisha is the only daughter of her parents. There are three students in a queue between Ashu and Manvi. Jack is one place ahead to the one who is second to right (in the same row) of his friend Tom. Surya is the brother of Payal. John is sitting ahead of Charu.

Attempt again or **View Solution**

Who among the following is sitting in the same queue as Charu?

A John

B Tom

C Payal

D Yukti

E None of the above

Directions : There are 48 students sitting in a class in such a way, that all facing north. Out of which girls and boys are in a ratio 1:2. They all are sitting in 12 rows, each row contains 4 students. So there will be four queues. All the students are sitting in such a formation that the row which is at the bottom is numbered as row 1, next is row 2 and row which is at the top is numbered as 12. All boys are arranged in a manner that there are Four boys sitting consecutively in top four rows and Four are sitting consecutively at the bottom four rows in all four queues whereas the middle four rows are occupied by all the girls in all four queues.

Ashu, who is a boy, is sitting in row 2 and nobody sits to the left of Ashu. Except John, all other friends of Manvi are girls. Payal is sitting to immediate right of Charu and immediate left of Alisha in the same row. Only three students are sitting between John and the one who is immediate left of Payal in a queue. Three students sit to the left of Yukti, who is a girl and she is sitting immediately behind Surya. Two students sit between Yukti and Alisha in a queue. Only two students are ahead of Jack in a queue. Two students are sitting between Tom and Manvi in a queue. Alisha is the only daughter of her parents. There are three students in a queue between Ashu and Manvi. Jack is one place ahead to the one who is second to right (in the same row) of his friend Tom. Surya is the brother of Payal. John is sitting ahead of Charu.

Attempt again or **View Solution**

Who among the following is not sitting in Row-5?

A Charu

B Payal

C Alisha

D Manvi

E None of these

Directions : In the questions given below, the symbols/numbers 1, 2, 3, 4, 5, 6, * and = are used with the following meanings as illustrated below. Study the information given below and answer the questions that follow.

H 1 J means 'A piece of H is J'

H 2 J means 'Each of the H is J'

H 3 J means 'Only a few H are J'

H 4 J means 'None of the H is J'

H 5 J means 'All H are J'

H 6 J means 'Several H are J'

* means possibility case

= means is not a possibility

Note: If * is placed after any of the number mentioned above then it will be considered as the possibility case of the number.

If **=** is placed after any of the number mentioned above then it will be considered as not a possibility case of the number.

E.g., H 5* J means All H are J is being a possibility.

H 5= J means All H are J is not a possibility.

A statement is followed by three conclusions. You have to take the given statements to be true even if they seem to be variance from the commonly known facts. Which of the following conclusions is/are true for the given statement?

Statement: A **2** G **6** Y **4** R **1** T; S **3** M **6** A

I. M 5= S

II. A 4 R 1= G

III. Y 6* T

A Only I is true

B Both II and III are true

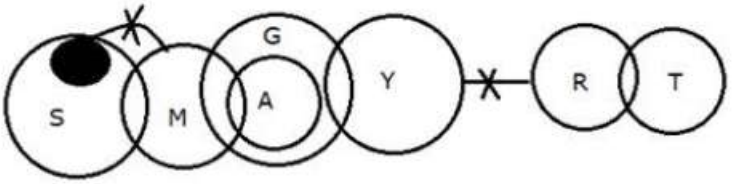
C None is true

D All are true

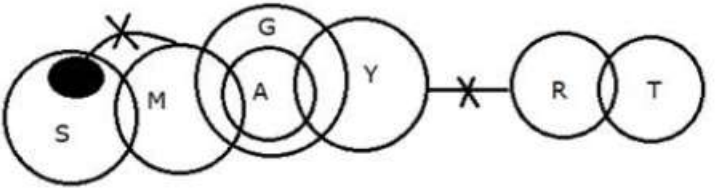
E Only III is true

Solution

It is given that;
H 1 J means 'A piece of H is J'
H 2 J means 'Each of the H is J'
H 3 J means 'Only a few H are J'
H 4 J means 'None of the H is J'
H 5 J means 'All H are J'
H 6 J means 'Several H are J'
* means possibility case
= means is not a possibility
The given statement is: A **2** G **6** Y **4** R **1** T; S **3** M **6** A
After decoding the statement, we get;
Each of the A is G.
Several G are Y.
None of the Y is R.
A piece (some) of R is T.
Only a few S are M.
Several M are A.



Or



Conclusions:

M 5= S i.e., All M are S is not a possibility: Some S are not M but all M can be S. So, conclusion I is false.

A 4 R 1= G i.e., No A is R and some R are G is not a possibility: Some A can be Y and no Y is R. Thus, some A which are not Y can be R. All A are G and thus some R can be G. So, conclusion II is false.

Y 6* T i.e., Several Y are T is a possibility: Some T are R and no R is Y. Thus, the T which are not R can be Y. so, conclusion III is true.

Directions : In the questions given below, the symbols/numbers 1, 2, 3, 4, 5, 6, * and = are used with the following meanings as illustrated below. Study the information given below and answer the questions that follow.

H 1 J means 'A piece of H is J'

H 2 J means 'Each of the H is J'

H 3 J means 'Only a few H are J'

H 4 J means 'None of the H is J'

H 5 J means 'All H are J'

H 6 J means 'Several H are J'

* means possibility case

= means is not a possibility

Note: If * is placed after any of the number mentioned above then it will be considered as the possibility case of the number.

If **=** is placed after any of the number mentioned above then it will be considered as not a possibility case of the number.

E.g., H 5* J means All H are J is being a possibility.

H 5= J means All H are J is not a possibility.

A statement is followed by conclusions. You have to take the given statements to be true even if they seem to be variance from the commonly known facts. Which of the following conclusions is true for the given statement?

Statement: C 5 B 1 N 4 W 2 O 3 M; K 6 C

A K 6= N

B W 1* M

C C 2 K

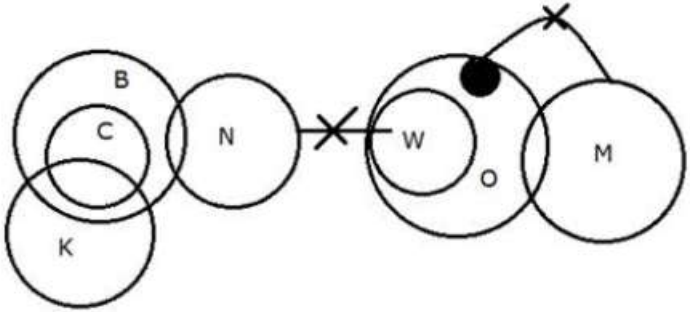
D O 4 N

E None is true

Solution

It is given that;
H 1 J means 'A piece of H is J'
H 2 J means 'Each of the H is J'
H 3 J means 'Only a few H are J'
H 4 J means 'None of the H is J'
H 5 J means 'All H are J'
H 6 J means 'Several H are J'
* means possibility case
= means is not a possibility
The statement is: C 5 B 1 N 4 W 2 O 3 M; K 6 C
After decoding the statement, we get:
All C are B.

The statement is: C 5 B 1 N 4 W 2 O 3 M; K 6 C
After decoding the statement, we get:
All C are B.
Some B are N.
No N is W.
Each W is O.
Only a few O are M.
Several K are C.



Option a) K 6= N i.e., Several K are N is not a possibility: All C are B. Some B are K and some B are N. Thus, some K are N is a possibility. So, option (a) is incorrect.
Option b) W 1* M i.e., Some W are M is being a possibility: All M can be O and some O are W. Thus, some W can be M. so, option (b) is correct.
Option c) C 2 K i.e., Each C is K: Some C are definitely K. Thus, all C can be K. So, option (c) is incorrect.
Option d) O 4 N i.e., No O is N: Some O are W and no W is N. Thus, the O which are not W can be N. So, option (d) is incorrect.

Directions : In a park, there is a circular boundary, that has three entry gates. Inside this circular boundary, a triangular boundary is there, concentric with the outer circular one. The triangular boundary has six gates, three gates with one at each corner and three with one at centre of each of its sides. The three gates of circular boundary are such that each gate exactly facing the gate at corners of the triangular boundary.

Nine persons are standing at these gates, one at each. Except the ones standing on the corners of triangular boundary, all are facing towards the centre of the park i.e. inside.

These persons are arranged in increasing order of their present ages from left to right and along with their respective weights (in kg.) is mentioned as follows -

R (78) < Q (61) < L (42) < P (63) < T (36) < N (43) < M (60) < S (54) < O (56)

The second lightest and the eldest persons do not stand immediate next to each other. R is facing the one whose weight is a multiple of 7 and is not P. P is standing immediate left to the one who is heavier than three persons. Only one of the persons standing at the circular boundary has weight in prime number. Q is facing towards the centre and doesn't stands immediate next to the eldest person. P faces outwards. Sum of the weights of persons standing immediate next to the heaviest person is 121 kg. If the persons standing at the gates of triangular boundary shuffled their position such that, they now stand in alphabetical order among themselves, starting from one of the corners in clockwise manner, then, the sum of the weights of the persons facing away from the centre remains the same. The persons standing immediate next to T, are both elder than T. O faces neither N nor T, O and L are not facing the same direction. The persons facing each other have weights in number of same type (i.e. either even or odd: such that, if one has even weight, other is also even, and same goes with odd).

What is the sum of the weights of the persons facing away from the centre of park?

A 141 kgs

B 183 kgs

C 199 kgs

D Cannot be determined

E 152 kgs

Solution

According to ages they are arranged as follows -
R (78) < Q (61) < L (42) < P (63) < T (36) < N (43) < M (60) < S (54) < O (56)

Solution

According to ages they are arranged as follows -

R (78) < Q (61) < L (42) < P (63) < T (36) < N (43) < M (60) < S (54) < O (56)

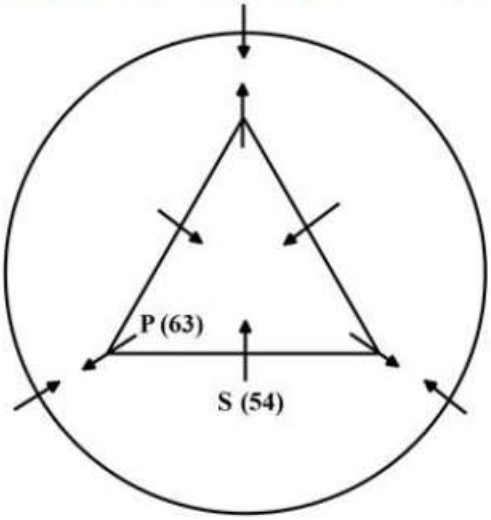
According to their weights, they are arranged as -

T (36) < L (42) < N (43) < S (54) < O (56) < M (60) < Q (61) < P (63) < R (78)

· P faces outwards.

· P is standing immediate left to the one who is heavier than three persons.

Hence, P stands immediate left to S and, P stands at the corner of the triangular boundary.



· R is facing the one whose weight is a multiple of 7 and is not P.

Hence, R can be on circle or on triangle.

Also, it is given that,

· Sum of the weights of persons standing immediate next to the heaviest person is 121 kg.

Only possible weights for this condition to be true are 60 and 61.

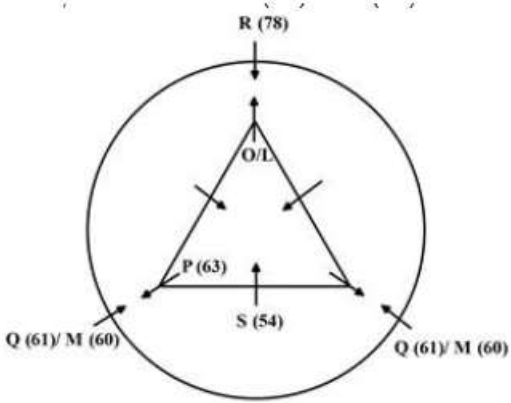
60+61 = 121 kg

Hence, M and Q are R's immediate neighbours.

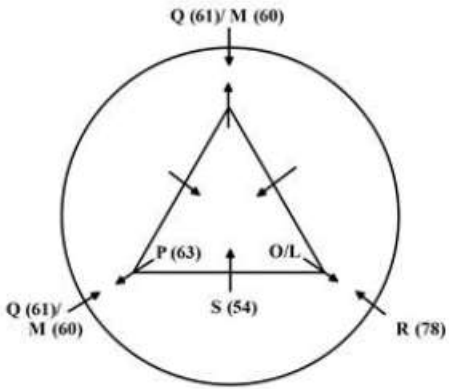
Case I: If R is standing on circle.

If R is standing on circle, then doesn't faces P.

Thus, R faces either L (42) or O (56).



CASE I(a)

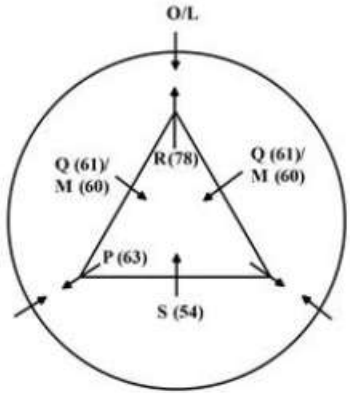


CASE I(b)

Case II: If R is standing on triangle.

Since, R is facing someone, so, only possible place for R to stand in triangle is the corners. R cannot be next to S, hence, we have only one possible case.

We get,



CASE II

CASE II

· Only one of the persons standing at the circular boundary has weight in prime number.

N is 43 kg and Q is 61 kg. These two only are prime numbers.

Thus, in case I(a) and I(b) - it is clear that Q is on circular boundary, hence, N will be on the triangle.

And, in case II - Q is on triangle so, N will be on circular boundary.

· The second lightest (L) and the eldest person (O) do not stand immediate next to each other.

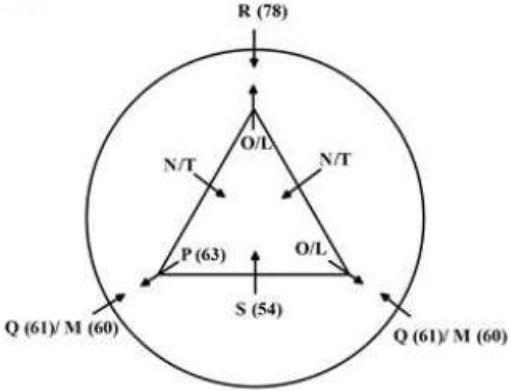
Also,

· Q is facing towards the centre and doesn't stands immediate next to the eldest person.

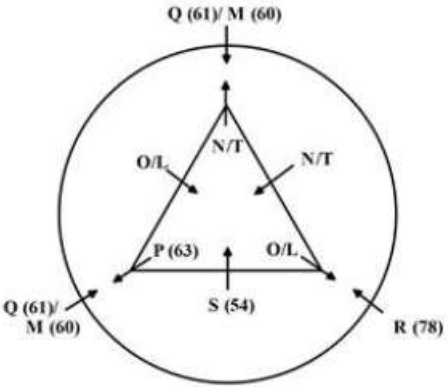
Hence, Q is not immediate next to O.

· O faces neither N nor T, O and L are not facing the same direction.

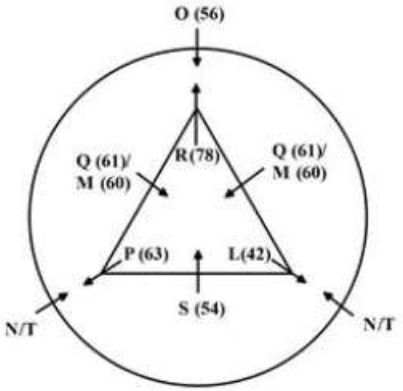
We get,



CASE I(a)



CASE I(b)

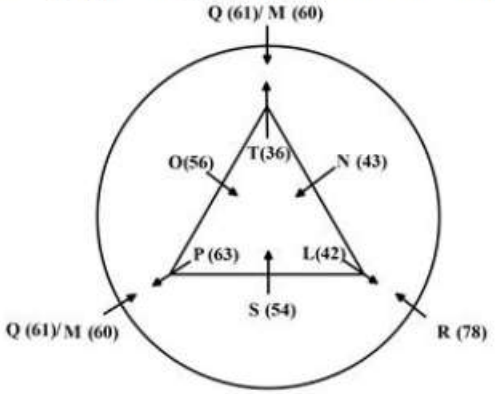


CASE II

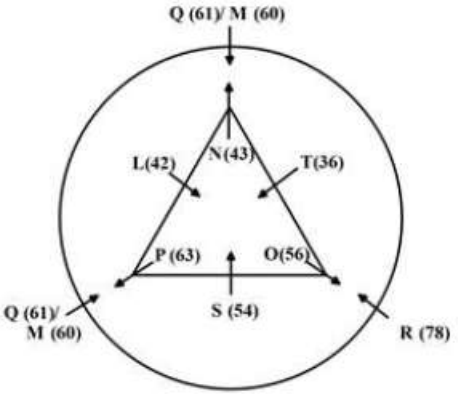
· The persons standing immediate next to T, are both elder than T. O and L are not facing the same direction.

Hence, case I(a) becomes invalid, as P and L all are not elder than T.

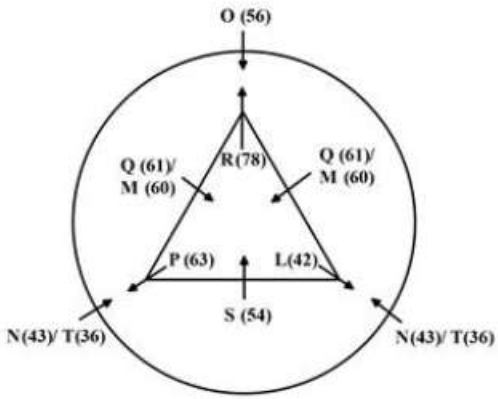
We get, (case II, for now, remains the same)



CASE I(b)-(i)



CASE I(b)-(ii)

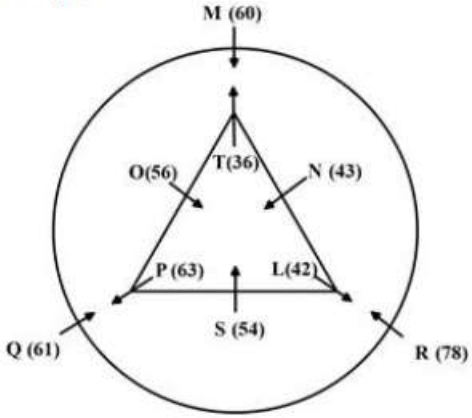


CASE II

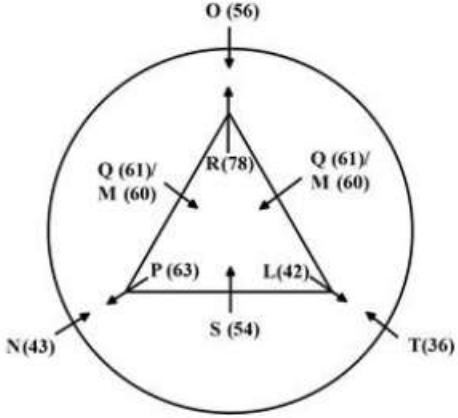
· The persons facing each other have weights in number of same type (Even and odd: such that, if one has even weight, other is also even, and same goes with odd).

Hence, case I(b)-ii, becomes invalid.

We get,



CASE I(b)-(i)



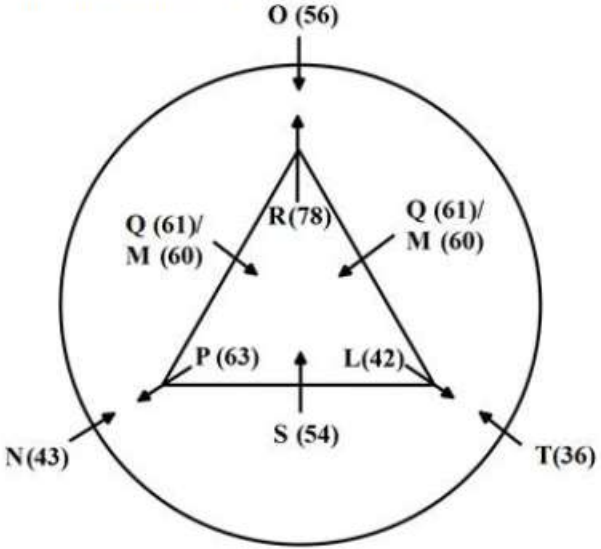
CASE II

· If the persons standing at the gates of triangular boundary shuffled their position such that, they now stand in alphabetical order among themselves, starting from one of the corners in clockwise manner, then, the sum of the weights of the persons facing away from the centre remains the same.

Hence, case I(b)-(i) becomes invalid, as, there the persons sitting at the corners change.

And, in case II, L, P and R remain seated at the corners only while re-arrangement, hence, sum remains the same.

Final arrangement is -



78 + 63 + 42 = 183 kgs.

Directions : In a park, there is a circular boundary, that has three entry gates. Inside this circular boundary, a triangular boundary is there, concentric with the outer circular one. The triangular boundary has six gates, three gates with one at each corner and three with one at centre of each of its sides. The three gates of circular boundary are such that each gate exactly facing the gate at corners of the triangular boundary.

Nine persons are standing at these gates, one at each. Except the ones standing on the corners of triangular boundary, all are facing towards the centre of the park i.e. inside.

These persons are arranged in increasing order of their present ages from left to right and along with their respective weights (in kg.) is mentioned as follows -

R (78) < Q (61) < L (42) < P (63) < T (36) < N (43) < M (60) < S (54) < O (56)

The second lightest and the eldest persons do not stand immediate next to each other. R is facing the one whose weight is a multiple of 7 and is not P. P is standing immediate left to the one who is heavier than three persons. Only one of the persons standing at the circular boundary has weight in prime number. Q is facing towards the centre and doesn't stands immediate next to the eldest person. P faces outwards. Sum of the weights of persons standing immediate next to the heaviest person is 121 kg. If the persons standing at the gates of triangular boundary shuffled their position such that, they now stand in alphabetical order among themselves, starting from one of the corners in clockwise manner, then, the sum of the weights of the persons facing away from the centre remains the same. The persons standing immediate next to T, are both elder than T. O faces neither N nor T, O and L are not facing the same direction. The persons facing each other have weights in number of same type (i.e. either even or odd: such that, if one has even weight, other is also even, and same goes with odd).

Attempt again or **View Solution**

How many persons standing at the triangular boundary who are younger than at least three persons?

A 3

B 2

C 5

D 4

E Cannot be determined

Directions : In a park, there is a circular boundary, that has three entry gates. Inside this circular boundary, a triangular boundary is there, concentric with the outer circular one. The triangular boundary has six gates, three gates with one at each corner and three with one at centre of each of its sides. The three gates of circular boundary are such that each gate exactly facing the gate at corners of the triangular boundary.

Nine persons are standing at these gates, one at each. Except the ones standing on the corners of triangular boundary, all are facing towards the centre of the park i.e. inside.

These persons are arranged in increasing order of their present ages from left to right and along with their respective weights (in kg.) is mentioned as follows -

R (78) < Q (61) < L (42) < P (63) < T (36) < N (43) < M (60) < S (54) < O (56)

The second lightest and the eldest persons do not stand immediate next to each other. R is facing the one whose weight is a multiple of 7 and is not P. P is standing immediate left to the one who is heavier than three persons. Only one of the persons standing at the circular boundary has weight in prime number. Q is facing towards the centre and doesn't stands immediate next to the eldest person. P faces outwards. Sum of the weights of persons standing immediate next to the heaviest person is 121 kg. If the persons standing at the gates of triangular boundary shuffled their position such that, they now stand in alphabetical order among themselves, starting from one of the corners in clockwise manner, then, the sum of the weights of the persons facing away from the centre remains the same. The persons standing immediate next to T, are both elder than T. O faces neither N nor T, O and L are not facing the same direction. The persons facing each other have weights in number of same type (i.e. either even or odd: such that, if one has even weight, other is also even, and same goes with odd).

Attempt again or **View Solution**

Who is standing to the immediate left of L?

A N

B Q

C M

D Either Q or M

E None of these

Directions : In a park, there is a circular boundary, that has three entry gates. Inside this circular boundary, a triangular boundary is there, concentric with the outer circular one. The triangular boundary has six gates, three gates with one at each corner and three with one at centre of each of its sides. The three gates of circular boundary are such that each gate exactly facing the gate at corners of the triangular boundary.

Nine persons are standing at these gates, one at each. Except the ones standing on the corners of triangular boundary, all are facing towards the centre of the park i.e. inside.

These persons are arranged in increasing order of their present ages from left to right and along with their respective weights (in kg.) is mentioned as follows -

R (78) < Q (61) < L (42) < P (63) < T (36) < N (43) < M (60) < S (54) < O (56)

The second lightest and the eldest persons do not stand immediate next to each other. R is facing the one whose weight is a multiple of 7 and is not P. P is standing immediate left to the one who is heavier than three persons. Only one of the persons standing at the circular boundary has weight in prime number. Q is facing towards the centre and doesn't stands immediate next to the eldest person. P faces outwards. Sum of the weights of persons standing immediate next to the heaviest person is 121 kg. If the persons standing at the gates of triangular boundary shuffled their position such that, they now stand in alphabetical order among themselves, starting from one of the corners in clockwise manner, then, the sum of the weights of the persons facing away from the centre remains the same. The persons standing immediate next to T, are both elder than T. O faces neither N nor T, O and L are not facing the same direction. The persons facing each other have weights in number of same type (i.e. either even or odd: such that, if one has even weight, other is also even, and same goes with odd).

Attempt again or **View Solution**

What is the position of P with respect to R?

A They do not stand in same boundary

B Second to the right

C Fourth to the right

D Third to the right

E More than one of the options is correct

Each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question:

If (3)A$B indicates A is 15m to the north of B; A*B(4) indicates B is 20m to the south of A; A&B(1) indicates B is 5m to the east of A; (2)A#B indicates A is 10m to the west of B; A%(5)B indicates the horizontal distance between A and B is 25m and A$B(6) indicates B is 30m to the north of A. What is the direction of O with respect to S?

Statement I: P*U(1); (3)M$P; O&U(8); P$L(2); (4)L$V; T*S(7) T%(5)P

Statement II: (4)P$M; (5)T$U; L*O(7); (2)M$O; M%(8)T; S&U(1)

A If the data either in statement I alone or in statement II alone is sufficient to answer the question.

B If the data in statement I alone is sufficient to answer the question, while the data in the statement II alone is not sufficient to answer the question.

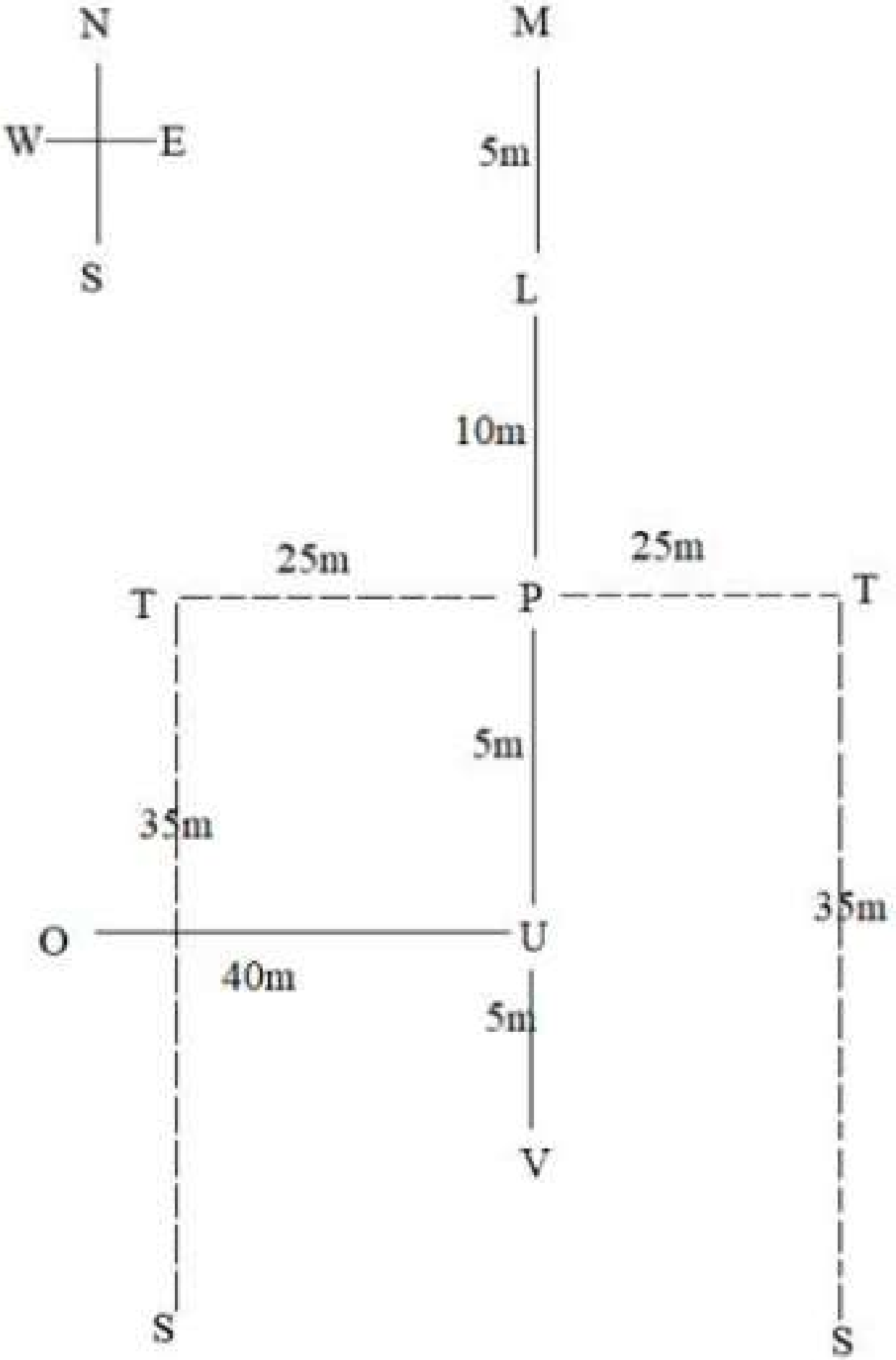
C If the data in both statement I and statement II together are not sufficient to answer the question.

D If the data in both statement I and statement II together are sufficient to answer the question.

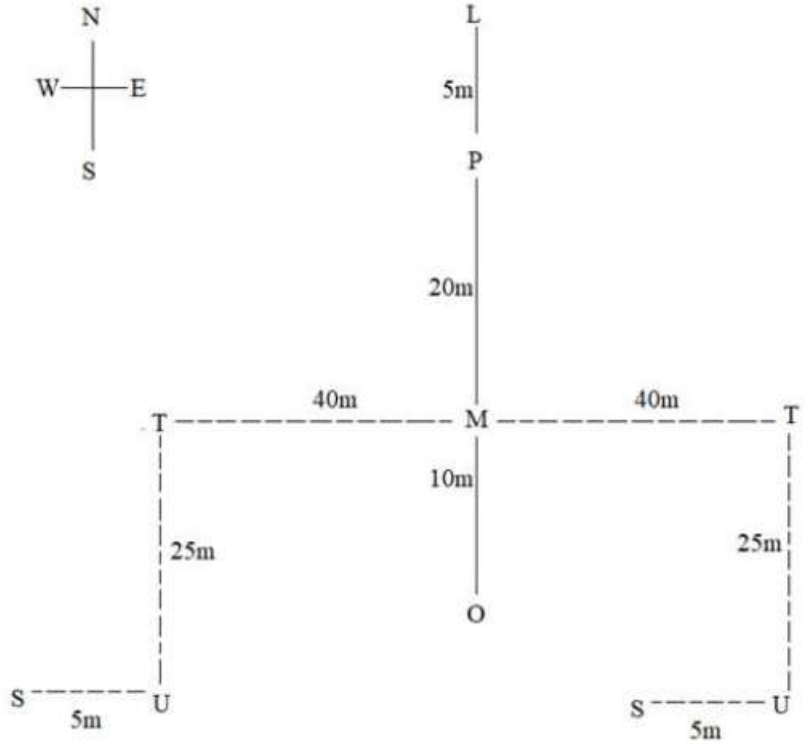
E If the data in the statement II alone is sufficient to answer the question, while the data in the statement I alone is not sufficient to answer the question.

Solution

(3)A$B indicates A is 15m to the north of B;
A*B(4) indicates B is 20m to the south of A;
A&B(1) indicates B is 5m to the east of A;
(2)A#B indicates A is 10m to the west of B;
A%(5)B indicates the horizontal distance between A and B is 25m;
A$B(6) indicates B is 30m to the north of A.
From statement I only:
P*U(1); (3)M$P; O&U(8); P$L(2); (4)L$V; (7)S*T; T%(5)P
P*U(1) indicates U is 5m to the south of P;
(3)M$P indicates M is 15m to the north of P;
O&U(8) indicates U is 40m to the east of O;
P$L(2) indicates L is 10m to the north of P;
(4)L$V indicates L is 20m to the north of V;
T*S(7) indicates S is 35m to the south of T;
T%(5)P indicates the horizontal distance between T and P is 25m.


N
W
E
S
M
5m
L
10m
25m
25m
T
P
T
5m
35m
35m
O
U
40m
5m
V
S
S

The point O is towards the northwest of point S.
So, statement I is sufficient.
From statement II only:
(4)P$M; (5)T$U; L*O(7); (2)M$O; (1)U&S; M%(8)T
(4)P$M indicates P is 20m to the north of M;
(5)T$U indicates T is 25m to the north of U;
L*O(7) indicates O is 35m to the south of L;
(2)M$O indicates M is 10m to the north of O;
S&U(1) indicates U is 5m to the east of S;
M%(8)T indicates the horizontal distance between M and T is 40m;



The point O is towards the northeast or northwest of point S.
So only statement II is not sufficient.

Two statements numbered I and II are given below. You have to decide whether the data provided in the statements are sufficient to answer the question.

Six persons C, J, L, O, R and Z were sitting in a linear row such that the distance between two adjacent persons are in consecutive multiples of 5 (in metres) starting from the person sitting at the extreme left. Some persons are facing north while some are facing south. The shortest distance between any two persons was 5 m. Neither L nor C were at the corners. R was facing north. The immediate neighbours of L were facing the same direction. O moves 10 m ahead and turns left and moves 30 m. Z moves 10 m ahead and turns right and moves 20 m. What is the shortest distance between O and Z now?

I. L was sitting to the immediate right of J and they were facing opposite directions. The distance between C and Z (before the movements) was 45 m. R was sitting second to the right of O and they were facing the same direction.

II. The distance between J and C (before the movements) was 30 m. L was sitting to the immediate left of O and they were facing opposite directions. Z was sitting to the immediate right of R and they were facing opposite directions.

A If the data in statement I alone are sufficient to answer the question while the data in statement II alone are not sufficient to answer the question

B If the data in both statements I and II together are not sufficient to answer the question

C If the data in statement II alone are sufficient to answer the question while the data in statement I alone are not sufficient to answer the question

D If the data either in statement I alone or in statement II alone are sufficient to answer the question

E If the data in both statements I and II together are necessary to answer the question

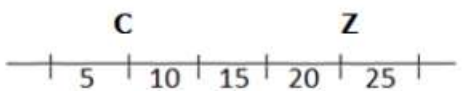
Solution

The shortest distance between any two persons was 5 m.

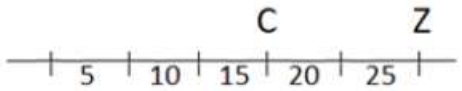
From I alone:

The distance between C and Z (before the movements) was 45 m.

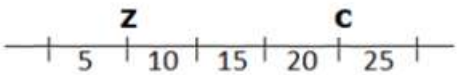
So, either the distances between them were (10 + 15 + 20) or (20 + 25). Hence, either two or one person were sitting in between them. Neither L nor C were at the corners.



Case 1

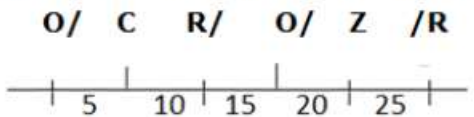


Case 2

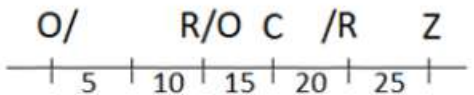


Case 3

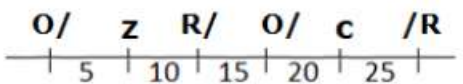
R was facing north. R was sitting second to the right of O and they were facing the same direction.



case 1



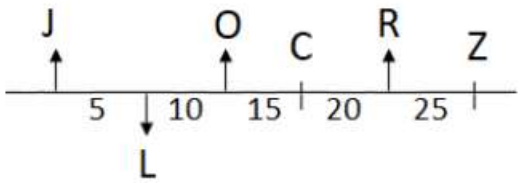
case2



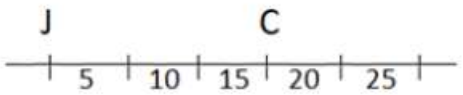
Case 3

Case 3

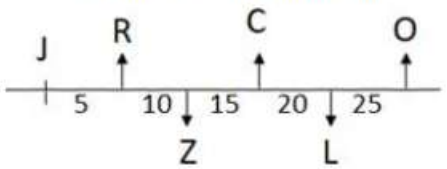
L was sitting to the immediate right of J and they were facing opposite directions. So, case 1 and case 3 are invalid.
Neither L nor C were at the corners. The immediate neighbours of L were facing the same direction.



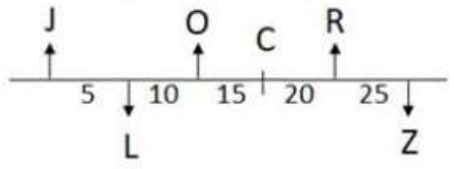
O moves 10 m ahead and turns left and moves 30 m. Z moves 10 m ahead and turns right and moves 20 m. But we do not know which direction Z is facing. So, statement I alone is not sufficient.
From II alone:
The distance between J and C (before the movements) was 30 m. So, 2 persons were sitting in between them. Neither L nor C were at the corners.



Z was sitting to the immediate right of R and they were facing opposite directions. R was facing north.
L was sitting to the immediate left of O and they were facing opposite directions. The immediate neighbours of L were facing the same direction.

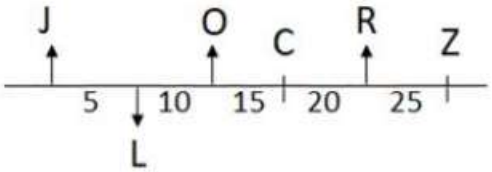


Case 1 (i)

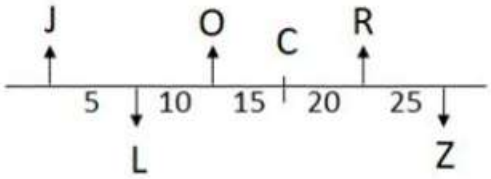


Case 1 (ii)

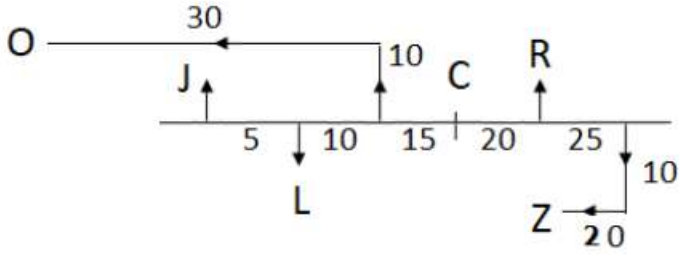
O moves 10 m ahead and turns left and moves 30 m. Z moves 10 m ahead and turns right and moves 20 m. But we do not know the exact positions of Z and O. So, statement II alone is not sufficient.
From I and II together:



We got the above arrangement from I alone. Z was sitting to the immediate right of R and they were facing opposite directions.



So, now we know the exact positions of O and Z. So, we can find the distance between O and Z after the movements:



So, both the statements together are necessary to answer the question.

The question below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question:

Ajeet, Madhu, Ranjan, Bhavya, Harsh, Abhinav and Jetan lives in seven floored building marked 1 to 7 in such a way that ground floor marked 1, floor above it marked as 2 and so on, each person likes different pet viz Cat, Dog, Owl, Rat, Deer, Parrot and Horse not necessary in same order. Bhavya likes Horse lives on odd numbered floor at a gap of two from Jetan, who lives just above one who likes Rat. One who likes Dog lives on top floor and one who likes Horse doesn't live on lowermost floor, then who lives just above the one who likes Parrot?

I. Madhu, who likes Deer lives on even numbered floor just below Harsh, who doesn't like Dog. Abhinav and one who likes Owl likes on adjacent floor and one who likes Owl doesn't live on even numbered floor.

II. One who likes Rat lives just below one who likes Cat, who lives at a gap of three floor from Abhinav. One who likes Deer and Harsh lives on adjacent floor and Ajeet likes Owl lives at a gap of two floor from Madhu, who neither lives on top nor on bottom.

A If the data in Statement I alone is sufficient to answer the question, while the data in Statement II alone is not sufficient to answer the question.

B If the data in Statement II alone is sufficient to answer the question, while the data in Statement I alone is not sufficient to answer the question.

C If the data either in Statement I alone or in Statement II alone is sufficient to answer the question.

D If the data in both the Statements I and II together are not sufficient to answer the question.

E If the data in both the Statements I and II together are necessary to answer the question.

Solution

We have:

• One who likes Dog lives on top floor. Bhavya likes Horse lives on odd numbered floor at a gap of two from Jetan, who lives just above one who likes Rat.

• One who likes Horse doesn't live on lowermost floor, that means we get two different case.

Case 1: Bhavya lives on floor numbered 5.

Name	Floor	Pet
	7	Dog
	6	
Bhavya	5	Horse
	4	
	3	
Jetan	2	
	1	Rat

Case 2: Bhavya lives on floor numbered 3.

Name	Floor	Pet
	7	Dog
Jetan	6	
	5	Rat
	4	
Bhavya	3	Horse
	2	
	1	

From I:

We have:

• Madhu, who likes Deer lives on even numbered floor just below Harsh, who doesn't like Dog.

• Abhinav and one who likes Owl likes on adjacent floor and one who likes Owl doesn't live on even numbered floor, that means case (1) is not valid and one who likes Owl lives on ground floor.

Based on above given information, we get:

Name	Floor	Pet
Rajan/Ajeet	7	Dog
Jetan	6	Cat/Parrot
Harsh	5	Rat
Madhu	4	Deer
Bhavya	3	Horse
Abhinav	2	Parrot/Cat
Ajeet/Rajan	1	Owl

Thus, we don't know who likes Parrot.

Hence, statement I is not sufficient.

From II:

We have:

• One who likes Rat lives just below one who likes Cat, who lives at a gap of three floor from Abhinav and Ajeet likes Owl lives at a gap of two floor from Madhu, who neither lives on top nor on bottom, that means case (1) is not valid and Ajeet lives on ground floor.

• One who likes Deer and Harsh lives on adjacent floor, that means Harsh must live on floor numbered 5.

Based on above given information, we get:

Name	Floor	Pet
Rajan	7	Dog
Jetan	6	Cat
Harsh	5	Rat
Madhu	4	Deer
Bhavya	3	Horse
Abhinav	2	Parrot
Ajeet	1	Owl

Thus, Bhavya lives just above one who likes Parrot.

Hence, statement II alone sufficient.

Directions : Study the given information and answer the following question based on it.

21 persons work in a bank at different post. The posts are in decreasing order i.e. ED, DGM, AGM, Manager, AM and Clerk. It is known that in any post the number of person posted were one more than the number of person posted in the immediate senior post. For example: If 4 person works as an AM then 5 person works as a Clerk. E, H and D work at same post. S is senior to V and C. None of X, Q, B or U is a Manager. P, L, M and W work at the same post. V is senior to X. C is senior to A. U and T are senior to L. R is senior to T but junior to F and G. V is junior to N. R and N do not work at same post. Q is senior to W. B is senior to O. C and Q works at the same post. A does not work as clerk, P does not work as AM and T does not work as AGM. S is senior to R but junior to G. F is not immediate senior to R and F is not an AGM.

Now, these persons are transferred to three departments i.e. HR, Marketing and Legal using the below conditions.

1) No transfer happens for the person who belongs to two highest position and they become leader of legal, Marketing and HR respectively according to the alphabetical order.

2) Persons whose name starts with a letter which comes before M in alphabetical order and he/she works with a person whose name starts with vowel went to HR.

3) Persons whose name starts with a letter which comes after M in alphabetical order and he/she works at a post which has even number of persons went to Marketing.

4) Rest will go to Legal department.

What is the designation of B?

A Manager

B AM

C DGM

D ED

E Clerk

Solution

Solution

· It is known that in any post the number of person posted were one more than the number of person posted in the immediate senior post.

DESIGNATION
ED
DGM
AGM
Manager
AM
Clerk

· A does not work as clerk, P does not work as AM and T does not work as AGM.

· C is senior to A.

· C and Q works at the same post.

· None of X, Q, B or U is a Manager.

· S is senior to V and C.

· S is senior to R but junior to G.

CASE 1:

DESIGNATION		
ED	G	
DGM	S	
AGM	C	Q
Manager	A	
AM		
Clerk		

CASE 2:

DESIGNATION						
ED	G					
DGM	S					
AGM	C	Q				
Manager						
AM	A					
Clerk						

· A does not work as clerk, P does not work as AM and T does not work as AGM.

· P, L, M and W work at the same post.

· U and T are senior to L.

· R is senior to T but junior to F and G.

CASE 1:

DESIGNATION						
ED	G					
DGM	S					
AGM	C	Q				
Manager	A					
AM						
Clerk	P	L	M	W		

CASE 2:

DESIGNATION						
ED	G					
DGM	S					
AGM	C	Q				
Manager						
AM	A					
Clerk	P	L	M	W		

· E, H and D work at same post.

· R is senior to T but junior to F and G.

· U and T are senior to L.

· F is not immediate senior to R and F is not an AGM.

CASE 1.1:

DESIGNATION						
ED	G					
DGM	S	F				
AGM	C	Q				
Manager	A	R				
AM	E	H	D	T		
Clerk	P	L	M	W		

CASE 1.2:

DESIGNATION						
ED	G					
DGM	S	F				
AGM	C	Q	R			
Manager	A	E	H	D		
AM	T	U				
Clerk	P	L	M	W		

CASE 2.1:

DESIGNATION						
ED	G					
DGM	S	F				
AGM	C	Q				
Manager	E	H	D	R		
AM	A	T				
Clerk	P	L	M	W		

CASE 2.2:

DESIGNATION						
ED	G					
DGM	S	F				
AGM	C	Q				
Manager	R					
AM	A	E	H	D	T	
Clerk	P	L	M	W		

In case 1.2, we see that F is immediate senior to R. Hence, it will be eliminated.

· Q is senior to W.

· S is senior to V and C.

· V is senior to X.

· V is junior to N.

· None of X, Q, B or U is a Manager.

· R and N do not work at same post.

· B is senior to O.

CASE 1.1:

DESIGNATION						
ED	G					
DGM	S	F				
AGM	C	Q	N			
Manager	A	R	B	U		
AM	E	H	D	T	V	
Clerk	P	L	M	W	X	O

CASE 1.1A:

DESIGNATION						
ED	G					
DGM	S	F				
AGM	C	Q	N			
Manager	A	R	V	B		
AM	E	H	D	T	U	
Clerk	P	L	M	W	X	O

CASE 2.1:

DESIGNATION						
ED	G					
DGM	S	F				
AGM	C	Q	N			
Manager	E	H	D	R		
AM	A	T	V	B	U	
Clerk	P	L	M	W	X	O

CASE 2.2:

DESIGNATION						
ED	G					
DGM	S	F				
AGM	C	Q	N			
Manager	R	V	B	U		
AM	A	E	H	D	T	
Clerk	P	L	M	W	X	O

Here, we see that U is a Manager in case 1.1 and case 2.2. And B is a Manager in case 1.1A Hence all these cases will be eliminated.

Therefore -

CASE 2.1:

DESIGNATION						
ED	G					
DGM	S	F				
AGM	C	Q	N			
Manager	E	H	D	R		
AM	A	T	V	B	U	
Clerk	P	L	M	W	X	O

Now,

· No transfer happens for the person who belongs to two highest position and they become leader of legal, Marketing and HR respectively according to the alphabetical order.

DEPARTMENT	LEADER	OTHER PERSONS
Legal	F	
Marketing	G	
HR	S	

· Persons whose name starts with a letter which comes before M in alphabetical order and he/she works with a person whose name starts with vowel went to HR.

DEPARTMENT	LEADER	OTHER PERSONS
Legal	F	
Marketing	G	
HR	S	D,H,B,L

· Persons whose name starts with a letter which comes after M in alphabetical order and he/she works at a post which has even number of persons went to Marketing.

DEPARTMENT	LEADER	OTHER PERSONS
Legal	F	
Marketing	G	R,O,P,W,X
HR	S	D,H,B,L

· Rest will go to Legal department.

DEPARTMENT	LEADER	OTHER PERSONS
Legal	F	C,Q,N,E,A,T,V,M
Marketing	G	R,O,P,W,X
HR	S	D,H,B,L

B is the AM. Hence, 'b' is the correct option.

Directions : Study the given information and answer the following question based on it.

21 persons work in a bank at different post. The posts are in decreasing order i.e. ED, DGM, AGM, Manager, AM and Clerk. It is known that in any post the number of person posted were one more than the number of person posted in the immediate senior post. For example: If 4 person works as an AM then 5 person works as a Clerk. E, H and D work at same post. S is senior to V and C. None of X, Q, B or U is a Manager. P, L, M and W work at the same post. V is senior to X. C is senior to A. U and T are senior to L. R is senior to T but junior to F and G. V is junior to N. R and N do not work at same post. Q is senior to W. B is senior to O. C and Q works at the same post. A does not work as clerk, P does not work as AM and T does not work as AGM. S is senior to R but junior to G. F is not immediate senior to R and F is not an AGM.

Now, these persons are transferred to three departments i.e. HR, Marketing and Legal using the below conditions.

1) No transfer happens for the person who belongs to two highest position and they become leader of legal, Marketing and HR respectively according to the alphabetical order.

2) Persons whose name starts with a letter which comes before M in alphabetical order and he/she works with a person whose name starts with vowel went to HR.

3) Persons whose name starts with a letter which comes after M in alphabetical order and he/she works at a post which has even number of persons went to Marketing.

4) Rest will go to Legal department.

Attempt again or **View Solution**

Which of the following is true based on the given options?

I. Q is an AGM.

II. B and V are the clerks.

III. G is the senior most person.

A Only I is true.

B Both I and II are true.

C Only II is true.

D Both II and III are true.

E None of the above.

Directions : Study the given information and answer the following question based on it.

21 persons work in a bank at different post. The posts are in decreasing order i.e. ED, DGM, AGM, Manager, AM and Clerk. It is known that in any post the number of person posted were one more than the number of person posted in the immediate senior post. For example: If 4 person works as an AM then 5 person works as a Clerk. E, H and D work at same post. S is senior to V and C. None of X, Q, B or U is a Manager. P, L, M and W work at the same post. V is senior to X. C is senior to A. U and T are senior to L. R is senior to T but junior to F and G. V is junior to N. R and N do not work at same post. Q is senior to W. B is senior to O. C and Q works at the same post. A does not work as clerk, P does not work as AM and T does not work as AGM. S is senior to R but junior to G. F is not immediate senior to R and F is not an AGM.

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3) Persons whose name starts with a letter which comes after M in alphabetical order and he/she works at a post which has even number of persons went to Marketing.

4) Rest will go to Legal department.

Attempt again or **View Solution**

If M is related to O and S is related to F then who is related to R?

A H

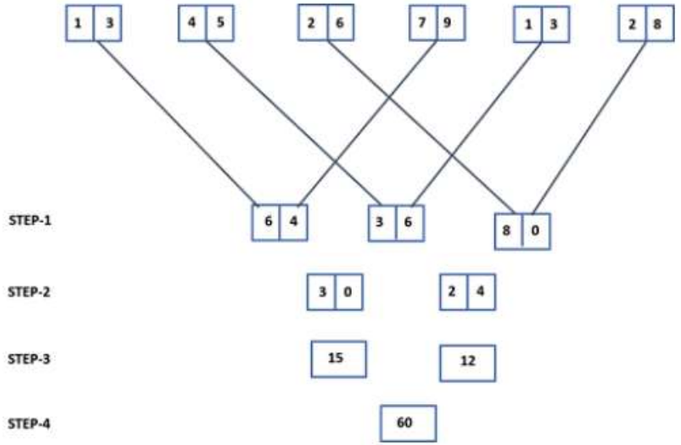
B N

C Q

D G

E P

Directions : When an input arrangement machine is given inputs, it arranges them following a rule. The following is the illustration of input and re-arrangement.



Study the arrangement and answer the following questions accordingly:

INPUT:

Answer following questions based on above information:

What is final output?

A 50

B 65

C 60

D 70

E None of these

Solution

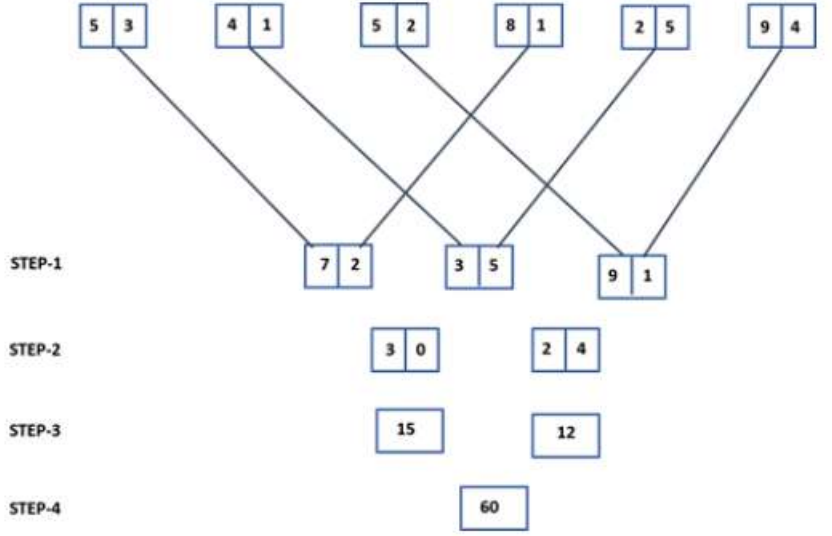
Step 1 is obtained by multiplying sum of digits of numbers shown by arrow. Sum of digits of number of one block is added to the sum of digits of number of another block.
e.g. (5+3) = 8
(8+1) = 9
9X8 = 72
Step 2 is obtained by finding sum of digits of all numbers obtained in each block:
7+2+3+5+9+1=27
Left block number in step-2 is written by adding 3 to obtained sum
right block number in step-2 is written by subtracting 3 from obtained sum
27+3=30
27-3= 24
Step 3 is obtained by dividing each number by 2
30/2 = 15
24/2 = 12

30/2 = 15

24/2 = 12

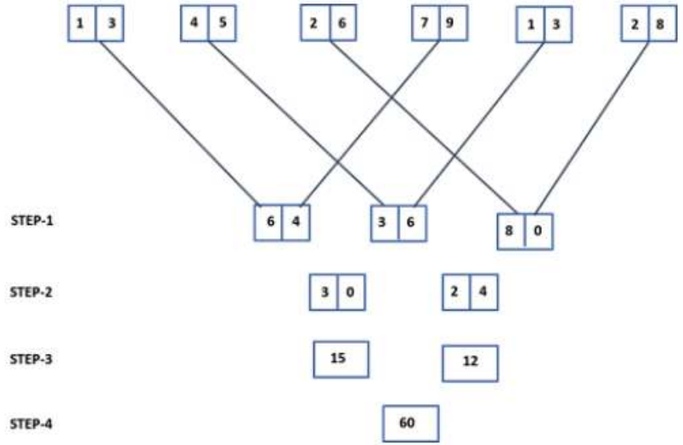
Final step is the one-third of the product of the numbers obtained in step 3.

15X12/3=180/3 = 60



Final output is 60.

Directions : When an input arrangement machine is given inputs, it arranges them following a rule. The following is the illustration of input and re-arrangement.



Study the arrangement and answer the following questions accordingly:

INPUT:

Answer following questions based on above information:

Attempt again or **View Solution**

What is the difference between numbers obtained in step-3?

A 4

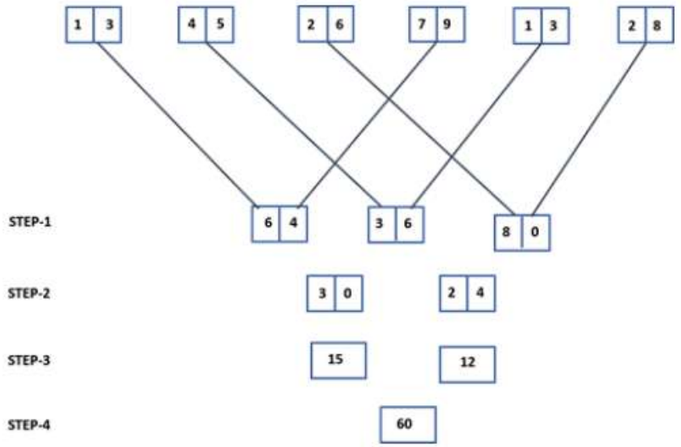
B 3

C 1

D 2

E None of these

Directions : When an input arrangement machine is given inputs, it arranges them following a rule. The following is the illustration of input and re-arrangement.



Study the arrangement and answer the following questions accordingly:

INPUT:

Answer following questions based on above information:

Attempt again or **View Solution**

What is the sum of digits of number written is middle block of step-1?

A 4

B 7

C 5

D 8

E None of these

10 letters are arranged to form a meaningful word. Letters are place in North direction. Letter A is placed to the immediate left of C, which is placed 2nd to the left of C, which is in turn placed 2nd to the left of A. 1 letter is placed between A and S, same is true for A and T. S and T are the 1st and last letters of the word in no particular order. E is placed 2nd to the left of R, which is placed 2nd to the left of F. P is also one of the letters of the word. From the meaningful word such formed 5th, 7th, 8th and 10th letter is picked to form another meaningful word (let's call it word-2). What will be the first letter of the word-2? If no such meaningful 'word-2' can be formed, then mark 'X'. if more than one such meaningful 'word-2' can be formed the mark 'Y'.

A X

B Y

C E

D A

E R

Solution

Letter A is placed to the immediate left of C, which is placed 2nd to the left of C, which is in turn placed 2nd to the left of A.

A	C		C		A

1 letter is placed between A and S, same is true for A and T.

S and T are the 1st and last letters of the word in no particular order.

Case 1: -

S		A	C		C		A		T

Case 2: -

T		A	C		C		A		S

E is placed 2nd to the left of R, which is placed 2nd to the left of F.

Case 1: -

S		A	C	E	C	R	A	F	T

Case 2: -

T		A	C	E	C	R	A	F	S

P is also one of the letters of the word.

Case 1: -

S	P	A	C	E	C	R	A	F	T

Case 2: -

T	P	A	C	E	C	R	A	F	S

Case 2 is invalid as it does not represent a meaningful word.

So, we get: -

S	P	A	C	**E**	C	**R**	**A**	F	**T**
1	2	3	4	**5**	6	**7**	**8**	9	**10**

The meaningful word formed after picking 4 letters = TEAR and RATE.

In the question given below, a passage is given followed by three statements which may or may not be inferred from the passage. Select the correct combination of statements that can be inferred.

The enforcement of environmental regulations often falls short of its intended goals, leading to significant consequences. While regulatory frameworks aim to protect ecosystems and minimize pollution, the reality in many regions reveals a stark disparity. In several states, environmental laws have been diluted or poorly enforced, allowing industries to continue harmful practices unabated. Despite advocates' efforts to strengthen regulations and ensure compliance, numerous cases highlight persistent challenges and systemic failures in safeguarding natural resources and public health. This inconsistency not only undermines environmental sustainability but also raises urgent concerns about the long-term impact on communities and biodiversity.

I. All industries are equally responsible for environmental damage.

II. Some factors beyond enforcement weaknesses might contribute to environmental challenges.

III. There are surely some potential economic rationale behind weak environmental regulations in some states.

A Only I

B Only III

C Only II ✓

D Both I and II

E Both II and III ✗

Solution

Statement I cannot be inferred from the passage. The passage does not make a blanket statement about all industries being equally responsible. It highlights that environmental regulations are often poorly enforced, allowing industries to continue harmful practices unabated. This suggests that the responsibility for environmental damage might vary among industries depending on how regulations are enforced or not enforced. Therefore, it cannot be inferred that all industries are equally responsible.
Statement II can be inferred from the passage. The passage discusses "persistent challenges and systemic failures" in safeguarding natural resources and public health, implying that there are factors beyond just enforcement weaknesses that contribute to environmental challenges. Thus, statement II can be inferred from the passage.
Statement III cannot be inferred from the passage. The passage mentions that in several states, environmental laws have been 'diluted or poorly enforced, allowing industries to continue harmful practices unabated.' While this suggests weak regulations, it does not explicitly suggests economic rationales behind them. Therefore, statement III cannot be inferred with certainty from the passage. Hence, (c) is the correct answer.

As a data analyst at a large tech company, you recently uncovered a significant security flaw during routine analysis that could potentially expose user data. The flaw involved a loophole in the authentication system, which could allow unauthorised access to sensitive personal information of millions of users. When you brought this issue to your supervisor's attention, he surprisingly downplayed its seriousness and advised you to keep quiet for the time being. His rationale centred around concerns about negative publicity, potential legal implications, and the disruptive impact on ongoing projects.

What should you do in the given situation/scenario?

A Follow your supervisor's instructions and hope for the best.

B Report the security flaw to higher management within the company after collecting additional evidence to support your findings.

C Report the security flaw immediately to a relevant regulatory authority anonymously.

D Try to fix the security flaw yourself without informing anyone so that user data is not exploited.

E Discuss the security flaw with your colleagues and seek input from them in order to get different perspectives and insights.

Solution

Option (b) is the most appropriate choice. The data analyst has a responsibility to protect user data and uphold ethical standards in handling sensitive information. Ignoring or hiding a security flaw that could jeopardize user data is unethical. Many jurisdictions have regulations that require companies to disclose data breaches and security flaws promptly. By reporting the issue to higher management, you are helping the company fulfil its legal obligations. Bringing the security flaw to the attention of higher management ensures that the issue is escalated to the appropriate stakeholders who can take necessary actions to mitigate the risk. Prompt disclosure and mitigation of the security flaw are crucial to protecting the personal information of millions of users who could be affected if the flaw is exploited.

Option (a) disregards the ethical and professional responsibility to protect user data.

Option (c) should only be considered after internal reporting channels have failed or if there is evidence of a cover-up or negligence by the company. The first step is to approach the internal management.

Option (d) can potentially lead to unauthorised changes and may not address the underlying systemic issue or provide transparency to affected users.

Option (e) is not correct as the issue needs to be escalated through official channels within the company to ensure proper handling and accountability. Also, security flaws are sensitive information. Sharing them widely increases the risk of a leak, which can cause panic among users or attract malicious actors who might try to exploit the vulnerability before it's fixed. Hence, (b) is the correct answer.

Microlearning, bite-sized educational modules delivered online, is revolutionising skill acquisition. Accessible via smartphones and similar devices, it meets the needs of today's fast-paced lifestyles and short attention spans. While microlearning doesn't substitute for the comprehensive education universities provide, it serves as a powerful tool for acquiring specific skills or refreshing existing knowledge. This trend prompts reflection on how traditional higher education institutions can incorporate microlearning into their curricula. Integrating microlearning could enhance the learning experience by offering flexible, on-demand learning opportunities that complement traditional classroom instruction. By doing so, universities can adapt to the demands of an increasingly dynamic world, where lifelong learning and skill agility are essential. Embracing microlearning may thus empower universities to better meet the diverse needs of modern learners and prepare them more effectively for the evolving job market and societal challenges ahead.

Which of the following statements, if true, would weaken the argument mentioned above?

A The majority of current university faculty lack the training or resources necessary to effectively develop and implement microlearning modules into their curricula.

B Microlearning can be integrated with traditional classroom instruction to reinforce key concepts, improve knowledge retention, and facilitate spaced repetition for better long-term learning.

C By offering microlearning modules as supplements or prerequisites, universities can free up classroom time for more in-depth discussions, critical thinking exercises, and collaborative activities.

D Microlearning's interactive and engaging formats can increase student motivation and active participation in learning compared to traditional lectures.

E Microlearning, when combined with traditional lectures and other learning activities, can create a blended learning environment that promotes application of knowledge.

Solution

The passage supports integrating microlearning into traditional higher education to enhance learning experiences and meet modern learner needs. The statement suggesting potential drawbacks or limitations of microlearning in the context of higher education will be the one that weakens the argument of the passage. Option (a) weakens the argument because it introduces a practical hurdle in implementing microlearning. If a majority of faculty lack the necessary resources or training, it would be difficult for universities to integrate microlearning effectively, hindering the potential benefits mentioned in the passage.
All other options strengthen the argument of the passage as they highlight the benefits of microlearning. Hence, (a) is the correct answer.

Many people hesitate to go hiking in unfamiliar terrain because they are concerned about getting lost. Consequently, they prefer to stick to well-marked trails.

Which of the following is/are the assumption(s) of the given passage?

I. Well-marked trails are often perceived as safer options for hiking compared to venturing onto unmarked or unfamiliar paths.

II. People who fear becoming disoriented or losing their way tend to exhibit a tendency to refrain from engaging in hiking activities.

III. Well-marked trails provide hikers with clear guidance and direction and also enhance safety.

A II only

B I only

C All I, II and III

D I and III only

E III only

Solution

The passage can be broken down into the following parts:
Premise: Many people hesitate to go hiking in unfamiliar terrain because they are concerned about getting lost.
Conclusion: Consequently, they prefer to stick to well-marked trails.
The one which appropriately connects the premise to the conclusion would be suitable
assumption.
Assumption I connects the premise with the conclusion by suggesting that people's preference for well-marked trails is based on their perception of safety. If people perceive well-marked trails as safer, it logically follows that they would prefer these trails to avoid the risk of getting lost in unfamiliar terrain.
Assumption II discusses a tendency related to people's fear of getting lost but does not directly connect to the conclusion that they prefer well-marked trails.
Assumption III supports the conclusion by reinforcing the idea that well-marked trails are safer due to the clear guidance they provide. It aligns with the conclusion that people prefer these trails because they enhance safety. This assumption provides related information but does not directly connect the premise to the conclusion. Hence, (b) is the correct answer.

Directions : Certain number of books are stacked horizontally in three different shelves A, B and C from top to bottom respectively. Each book was published in different years. The books on each shelf are kept in consecutive order of the years they were published such that a book was published in the immediate year before the book to its immediate right and so on. All the books were published in consecutive years.

NOTE: If 'n' books are kept in between P and Q, then P and Q are in the same shelf. If P is on top of Q, then P is on one of the shelves above Q.

Z was published in the year 2007. Equal number of books are kept on either side of Z. Z is not kept to the left of H. L was not published in 2011. G is on the shelf immediately above F. H is to the immediate right of G. Two books are kept in between H and K. K was published after H. Three books are to the right of K. The book published in 1994 is at the extreme right of the shelf above K. Two books are kept in between S and R. S is to the left of R. F is kept to the immediate left of R. Four books are kept to the right of F. The book to the immediate right of R was published in the year 1999. L is at the extreme right of shelf B. The number of books in between K and L is half the number of books on shelf A.

Attempt again or **View Solution**

Which book is kept to the immediate left of G?

A The one published in the year 1999

B The one published in the year 2004

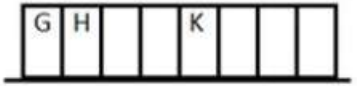
C The one published in the year 2001

D The one published in the year 2005

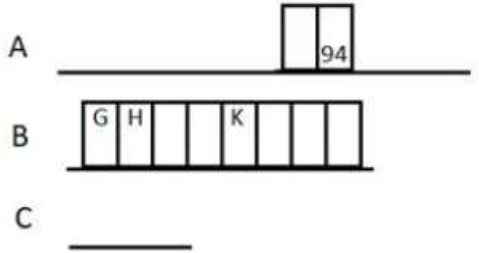
E The one published in the year 2003

Solution

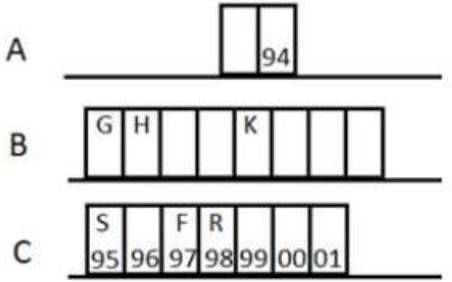
H is to the immediate right of G. Two books are kept in between H and K. K was published after H. Three books are to the right of K.



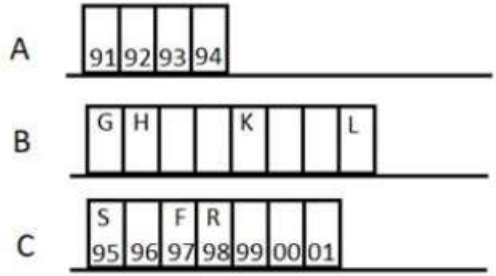
G is on the shelf immediately above F. The book published in 1994 is at the extreme right of the shelf above K.



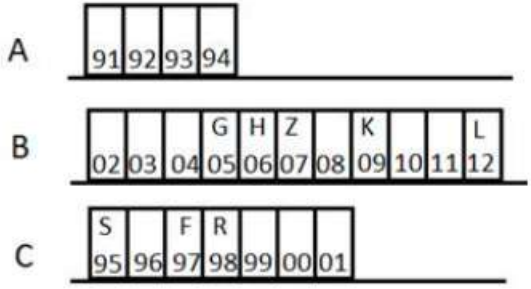
F is kept to the immediate left of R. Four books are kept to the right of F. The book to the immediate right of R was published in the year 1999. Two books are kept in between S and R. S is to the left of R. So, S was published in 1995. So, S must be at the extreme left on shelf C.



So, the book at the extreme left of B must have been published in 2003. Z was published in the year 2007. L is at the extreme right of shelf B. The number of books in between K and L is half the number of books on shelf A. So, A has 4 books.



Equal number of books are kept on either side of Z. Z is not kept to the left of H. So, if Z is to the immediate left of K, four books will be on either side of Z but L was not published in 2011. Hence, we get:



The one published in the year 2004 is kept to the immediate left of G.

Directions : Certain number of books are stacked horizontally in three different shelves A, B and C from top to bottom respectively. Each book was published in different years. The books on each shelf are kept in consecutive order of the years they were published such that a book was published in the immediate year before the book to its immediate right and so on. All the books were published in consecutive years.

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Attempt again or **View Solution**

Which of the following books is on top of R?

I. The book published in the year 2001

II. The book published in the year 1990

III. The book published in the year 2008

A None of the given

B Only I

C Both I and II

D Only III

E Both II and III

Directions : Certain number of books are stacked horizontally in three different shelves A, B and C from top to bottom respectively. Each book was published in different years. The books on each shelf are kept in consecutive order of the years they were published such that a book was published in the immediate year before the book to its immediate right and so on. All the books were published in consecutive years.

NOTE: If 'n' books are kept in between P and Q, then P and Q are in the same shelf. If P is on top of Q, then P is on one of the shelves above Q.

Z was published in the year 2007. Equal number of books are kept on either side of Z. Z is not kept to the left of H. L was not published in 2011. G is on the shelf immediately above F. H is to the immediate right of G. Two books are kept in between H and K. K was published after H. Three books are to the right of K. The book published in 1994 is at the extreme right of the shelf above K. Two books are kept in between S and R. S is to the left of R. F is kept to the immediate left of R. Four books are kept to the right of F. The book to the immediate right of R was published in the year 1999. L is at the extreme right of shelf B. The number of books in between K and L is half the number of books on shelf A.

Attempt again or **View Solution**

If T is kept on shelf A and two books are kept to the left of T, then in which year was T published?

A 1994

B 1995

C 1991

D 1993

E 1992