

Reasoning

Syllogism

Direction(1-4):In each question below are given three statements followed by two conclusions numbered I and II. You have to take the given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusions logically follows from the given statements, disregarding commonly known facts.

Direction: नीचे दिए गए प्रत्येक प्रश्न में तीन कथन दिए गए हैं जिसके बाद दो निष्कर्ष I और II दिए गए हैं। आपको दिए गए कथनों को सत्य मानना है, भले ही वे सामान्य रूप से ज्ञात तथ्यों से भिन्न प्रतीत होते हों और फिर तय करें कि दिए गए निष्कर्षों में से कौन सा निष्कर्ष सामान्य रूप से ज्ञात तथ्यों की अवहेलना करते हुए दिए गए कथनों का तार्किक रूप से अनुसरण करता है।

Give answer

उत्तर दे

1)

Statements: All Moderna are Pfizer. All Pfizer are Covishield. Some SputnikV are Pfizer.

कथन: सभी मॉडर्ना फाइजर हैं। सभी फाइजर कोविशील्ड हैं। कुछ स्पुतनिकV फाइजर हैं।

Conclusions: I. Some Covishield are SputnikV.

निष्कर्ष: I. कुछ कोविशील्ड स्पुतनिकV हैं।

II. Some SputnikV are not Covishield.

II. कुछ स्पुतनिकV कोविशील्ड नहीं हैं।

1. If only conclusion I follows.

यदि केवल निष्कर्ष I अनुसरण करता है।

2. If only conclusion II follows.

यदि केवल निष्कर्ष II अनुसरण करता है।

3. If either conclusion I or II follows.

यदि या तो निष्कर्ष I या II अनुसरण करता है।

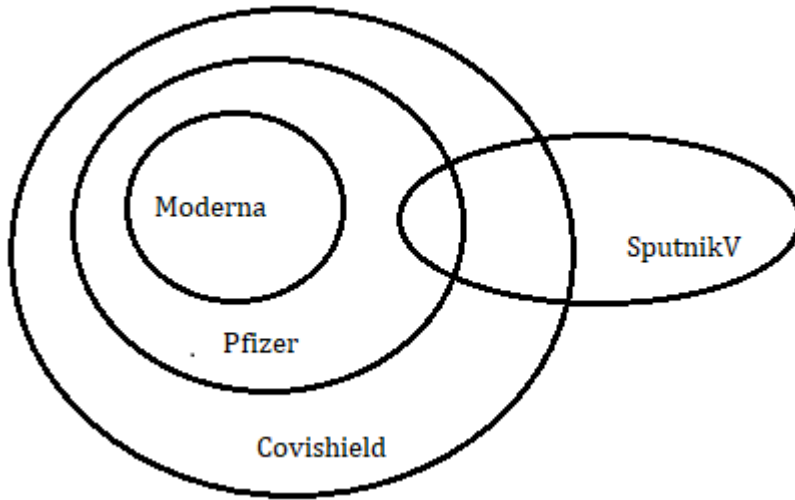
4. If neither conclusion I nor II follows.

यदि न तो निष्कर्ष I और न ही II अनुसरण करता है।

5. If both conclusions I and II follow.

यदि निष्कर्ष I और II दोनों अनुसरण करते हैं।

Solution:



2)

Statements: Only a few Garbage are Dustbin. Only Bag is Clean. No Bag is Garbage.
कथन: केवल कुछ गारबेज डस्टबिन हैं। केवल बैग क्लीन है। कोई बैग गारबेज नहीं है।

Conclusions: I. All Clean can be Dustbin.

निष्कर्ष: I. सभी क्लीन डस्टबिन हो सकते हैं।

II. At least some Dustbin are Bag.

II. कम से कम कुछ डस्टबिन बैग हैं।

1. If only conclusion I follows.

यदि केवल निष्कर्ष I अनुसरण करता है।

2. If only conclusion II follows.

यदि केवल निष्कर्ष II अनुसरण करता है।

3. If either conclusion I or II follows.

यदि या तो निष्कर्ष I या II अनुसरण करता है।

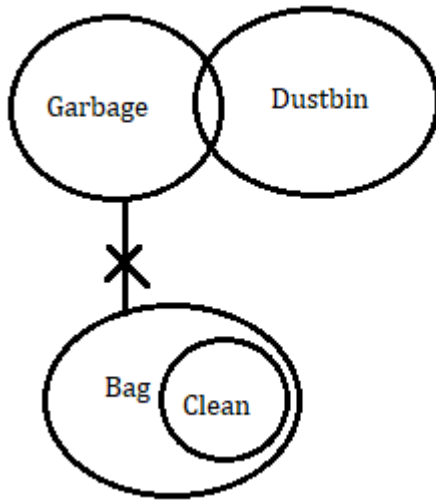
4. If neither conclusion I nor II follows.

यदि न तो निष्कर्ष I और न ही II अनुसरण करता है।

5. If both conclusions I and II follow.

यदि निष्कर्ष I और II दोनों अनुसरण करते हैं।

Solution:



3)

Statements: Some Book are Pen. Only few Pen are Glue. All Glue are Eraser.

कथन: कुछ बुक पेन हैं. केवल कुछ पेन ग्लू हैं. सभी ग्लू इरेज़र हैं.

Conclusions: I. Some Glue are not Pen.

निष्कर्ष: I. कुछ ग्लू पेन नहीं हैं।

II. Some Pen are Eraser is a possibility.

II. कुछ पेन के इरेज़र होने की सम्भावना है

1. If only conclusion I follows.

यदि केवल निष्कर्ष I अनुसरण करता है।

2. If only conclusion II follows.

यदि केवल निष्कर्ष II अनुसरण करता है।

3. If either conclusion I or II follows.

यदि या तो निष्कर्ष I या II अनुसरण करता है।

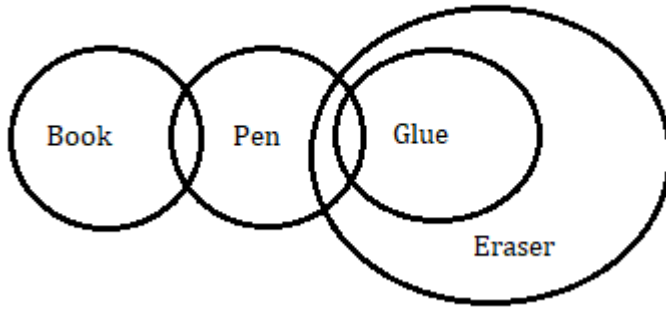
4. If neither conclusion I nor II follows.

यदि न तो निष्कर्ष I और न ही II अनुसरण करता है।

5. If both conclusions I and II follow.

यदि निष्कर्ष I और II दोनों अनुसरण करते हैं।

Solution:



4)

Statements: All Moderna are Pfizer. All Pfizer are Covishield. Only a few SputnikV are Pfizer.

कथन: सभी मॉडर्न फाइजर हैं। सभी फाइजर कोविशील्ड हैं। केवल कुछ स्पुतनिकV फाइजर हैं।

Conclusions: I. Some Moderna are SputnikV

निष्कर्ष: I. कुछ मॉडर्न स्पुतनिकV हैं

II. Some SputnikV can never be Pfizer

II. कुछ स्पुतनिकV कभी फाइजर नहीं हो सकते हैं

1. If only conclusion I follows.

यदि केवल निष्कर्ष I अनुसरण करता है।

2. If only conclusion II follows.

यदि केवल निष्कर्ष II अनुसरण करता है।

3. If either conclusion I or II follows.

यदि या तो निष्कर्ष I या II अनुसरण करता है।

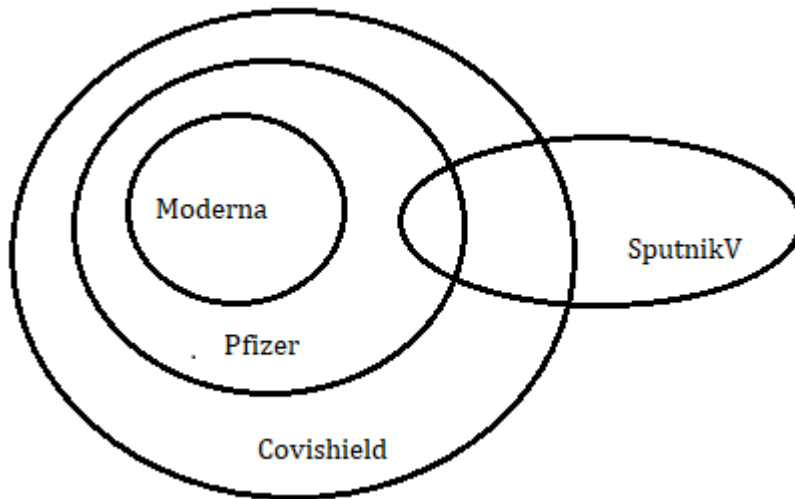
4. If neither conclusion I nor II follows.

यदि न तो निष्कर्ष I और न ही II अनुसरण करता है।

5. If both conclusions I and II follow.

यदि निष्कर्ष I और II दोनों अनुसरण करते हैं।

Solution:



Puzzles

Q.(5-9) Study the following information carefully and answer the questions given below.

Eight boxes are placed one above the other. There are three boxes placed between D and B. Two boxes are placed between A and H. Box H are kept just below box B. There are two boxes between the box B and E. Two boxes are placed between the box C and G. Box C is placed at the bottom. Box F does not place immediately below the box A.

निम्नलिखित जानकारी का ध्यानपूर्वक अध्ययन करें और नीचे दिए गए प्रश्नों के उत्तर दें।
आठ बॉक्स को एक के ऊपर एक करके रखा गया है। D और B के बीच तीन बॉक्स रखे गए हैं। A और H के बीच दो बॉक्स रखे गए हैं। बॉक्स H को बॉक्स B के ठीक नीचे रखा गया है। बॉक्स B और E के बीच दो बॉक्स हैं। दो बॉक्स, बॉक्स C और G के बीच रखे गए हैं। बॉक्स C सबसे नीचे रखा गया है। बॉक्स F, बॉक्स A के ठीक नीचे नहीं रखा है।

5. How many boxes are placed between box F and G?
बॉक्स F और G के मध्य कितने बॉक्स रखे गए हैं?

- a. One
एक
- b. Two
दो
- c. Three
तीन

d. More than Three
तीन से अधिक

e. None of these
इनमें से कोई नहीं

Solution: From the given conditions, two boxes placed between A and H. Box H kept just below box B. There are three boxes placed between D and B. There are two possibilities-

Case-1	Case-2
Boxes	Boxes
A	D
B	A
H	
	B
	H
D	

There are two boxes between the box B and E. Two boxes are placed between the box C and box G. Box C placed at the bottom. Box F does not place immediately below the box A. case-1 will be ruled out.

The final arrangement is-

Boxes
F
D
E
A
G
B
H
C

6. Which of the following box is placed immediate above box A?
निम्नलिखित में से कौन सा बॉक्स, बॉक्स A के ठीक ऊपर रखा गया है?

- a. D
- b. E
- c. G
- d. H
- e. None of these
इनमें से कोई नहीं

Solution: From the given conditions, two boxes placed between A and H. Box H kept just below box B. There are three boxes placed between D and B. There are two possibilities-

Case-1	Case-2
Boxes	Boxes
A	D
B	A
H	
	B
	H
D	

There are two boxes between the box B and E. Two boxes are placed between the box C and box G. Box C placed at the bottom. Box F does not place immediately below the box A. case-1 will be ruled out. The final arrangement is-

Boxes
F
D
E
A
G
B
H
C

7. The number of boxes placed between box D and H is same as the number of boxes placed between box _____ and _____?

बॉक्स D और H के बीच रखे गए बॉक्स की संख्या, _____ और _____ के बीच रखे गए बॉक्स की संख्या के समान है?

- A, C
- F, E
- B, D
- C, E
- None of these
इनमें से कोई नहीं

Solution: From the given conditions, two boxes placed between A and H. Box H kept just below box B. There are three boxes placed between D and B. There are two possibilities-

Case-1	Case-2
Boxes	Boxes
A	D
B	A
H	
	B
	H
D	

There are two boxes between the box B and E. Two boxes are placed between the box C and box G. Box C placed at the bottom. Box F does not place immediately below the box A. case-1 will be ruled out.

The final arrangement is-

Boxes
F
D
E
A
G
B
H
C

8. Which of the box is placed on the top?
इनमें से कौन सा बॉक्स सबसे ऊपर रखा गया है?

- F
- D
- A
- G
- None of these
इनमें से कोई नहीं

Solution: From the given conditions, two boxes placed between A and H. Box H kept just below box B. There are three boxes placed between D and B. There are two possibilities-

Case-1	Case-2
Boxes	Boxes
A	D
B	A
H	
	B
	H
D	

There are two boxes between the box B and E. Two boxes are placed between the box C and box G. Box C placed at the bottom. Box F does not place immediately below the box A. case-1 will be ruled out.

The final arrangement is-

Boxes
F
D
E
A
G
B
H
C

9

Which of the following statement is true about box G?

बॉक्स G के बारे में निम्नलिखित में से कौन सा कथन सत्य है?

- Box H is placed immediate below box G
बॉक्स H, बॉक्स G के ठीक नीचे रखा गया है
- Position of box G is fourth from the top
बॉक्स G का स्थान ऊपर से चौथा है
- Two boxes are placed between box G and E
बॉक्स G और E के मध्य दो बॉक्स रखे गए हैं
- Not more than three boxes placed below box G
बॉक्स G के नीचे तीन से अधिक बॉक्स नहीं रखे गए हैं
- None of these
इनमें से कोई नहीं

Solution: From the given conditions, two boxes placed between A and H. Box H kept just below box B. There are three boxes placed between D and B. There are two

possibilities-

Case-1	Case-2
Boxes	Boxes
A	D
B	A
H	
	B
	H
D	

There are two boxes between the box B and E. Two boxes are placed between the box C and box G. Box C placed at the bottom. Box F does not place immediately below the box A. case-1 will be ruled out.

The final arrangement is-

Boxes
F
D
E
A
G
B
H
C

Seating Arrangement

Q.10-13 Study the following information carefully and answer the questions given below:

निम्नलिखित जानकारी का ध्यानपूर्वक अध्ययन कीजिये और नीचे दिए गए प्रश्नों के उत्तर दीजिये:

Six persons A, B, C, D, E and F are sitting around a triangular table such that three of them sit at the corners and the rest on the middle of the side. The one who sits at the corner face away from the centre and the one who sits at the middle of the side face towards the centre.

B sits immediately to the right of C. One person sits between B and E. Two persons sit between A and D. Both A and F are not sitting adjacent to each other. F does not sit on any corner side of the table.

छह व्यक्ति A, B, C, D, E और F एक त्रिभुजाकार मेज के चारों ओर इस प्रकार बैठे हैं कि उनमें से तीन कोने पर और शेष भुजा के मध्य में बैठे हैं। कोने पर बैठे व्यक्ति, केंद्र से बाहर की ओर उन्मुख है और भुजा

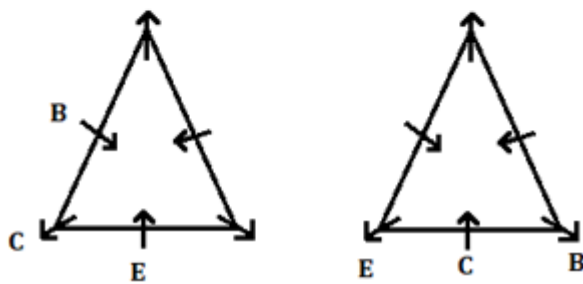
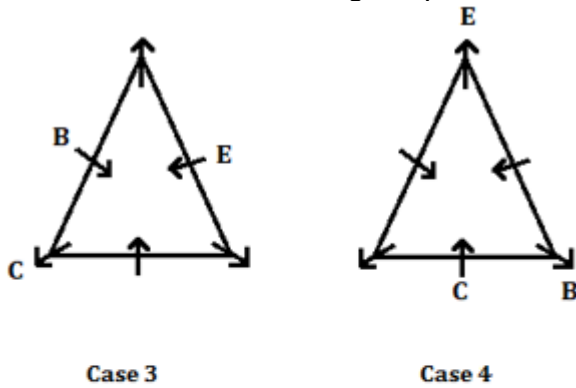
के मध्य में बैठे व्यक्ति केंद्र की ओर उन्मुख है।

B, C के ठीक दायें बैठा है। B और E के बीच एक व्यक्ति बैठा है। A और D के बीच दो व्यक्ति बैठे हैं। A और F दोनों एक दूसरे के आसन्न नहीं बैठे हैं। F मेज के किसी कोने पर नहीं बैठा है।

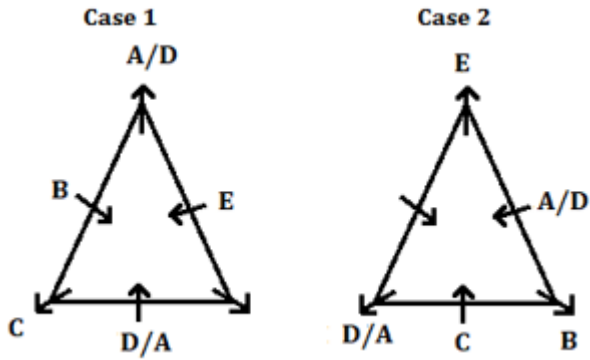
10. Who among the following sits immediately to the right of E?
निम्नलिखित में से कौन E के ठीक दायें बैठा है?

- a. C
- b. D
- c. F
- d. A
- e. Can't be determined
निर्धारित नहीं किया जा सकता

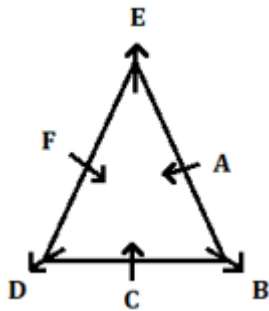
Solution: From the given statements, B sits immediate to the right of C. One person sits between B and E. Here we get 4 possibilities i.e., Case 1, Case 2, Case 3 and Case 4.



Two persons sit between A and D. From this condition Case 3 and Case 4 are eliminated.



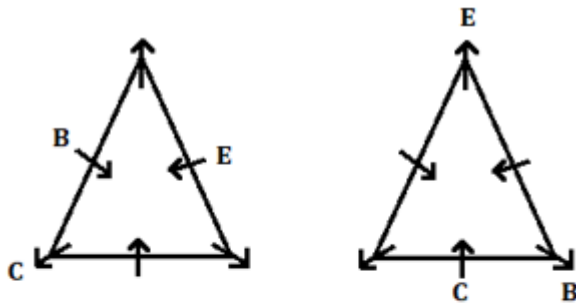
Both A and F are not sitting adjacent to each other. F does not sit any corner side of the table. Here Case 1 is ruled out now. So, the final arrangement-



11. Who among the following sits 4th to the right of F?
निम्नलिखित में से कौन F के दायें से चौथे स्थान पर बैठा है?

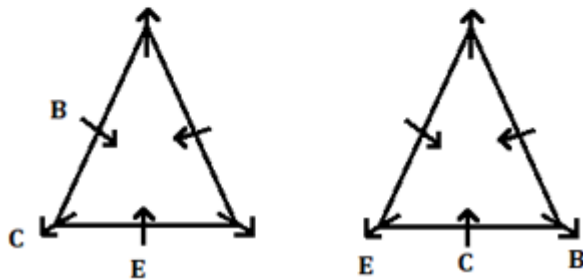
- a. A
- b. D
- c. C
- d. E
- e. B

Solution: From the given statements, B sits immediate to the right of C. One person sits between B and E. Here we get 4 possibilities i.e., Case 1, Case 2, Case 3 and Case 4.

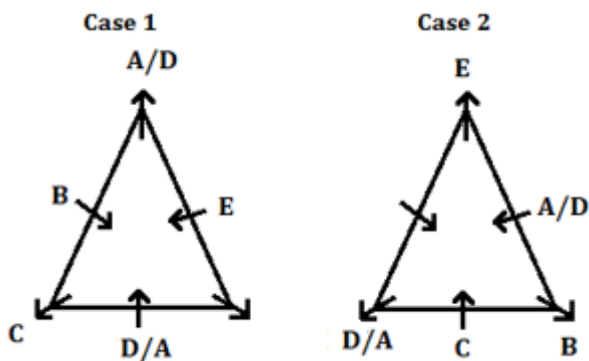


Case 3

Case 4



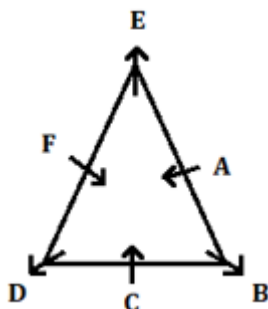
Two persons sit between A and D. From this condition Case 3 and Case 4 are eliminated.



Case 1

Case 2

Both A and F are not sitting adjacent to each other. F does not sit any corner side of the table. Here Case 1 is ruled out now. So, the final arrangement-

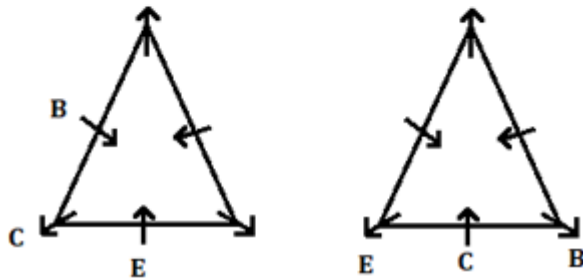
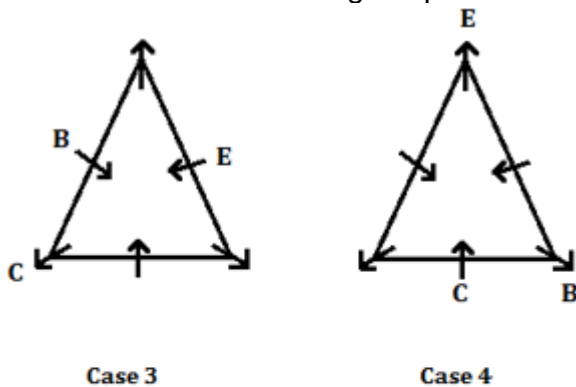


12. The number of persons sit between C and A, when counted to the left of A is the same as the number of persons sit between D and ___ when counted to the left of ___? A के बायें ओर से गिनने पर, C और A के बीच बैठे व्यक्तियों की संख्या, ___ के बायें ओर से गिनने पर,

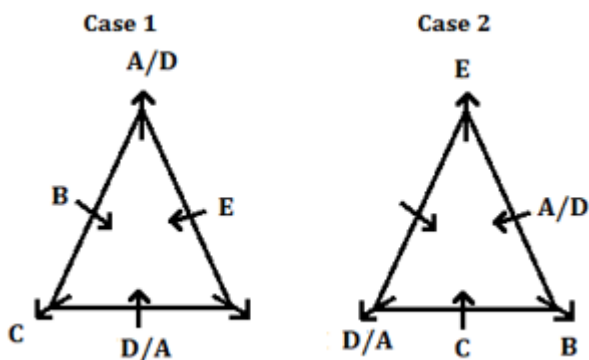
D और ___ के बीच बैठे व्यक्तियों की संख्या के समान है?

- a. B
- b. E
- c. C
- d. A
- e. F

Solution: From the given statements, B sits immediate to the right of C. One person sits between B and E. Here we get 4 possibilities i.e., Case 1, Case 2, Case 3 and Case 4.

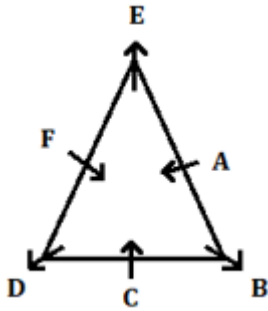


Two persons sit between A and D. From this condition Case 3 and Case 4 are eliminated.



Both A and F are not sitting adjacent to each other. F does not sit any corner side of the

table. Here Case 1 is ruled out now. So, the final arrangement-

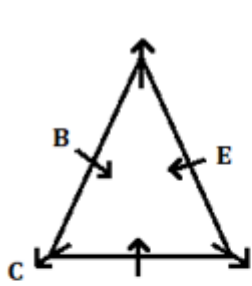


13. If A and D, are interchanged their position with each other then who among the following sits immediate left of B?

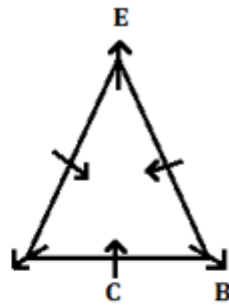
यदि A और D, एक दूसरे के साथ अपना स्थान बदल लेते हैं, तो निम्नलिखित में से कौन B के ठीक बायें बैठा है?

- a. A
- b. D
- c. F
- d. C
- e. None of these
इनमें से कोई नहीं

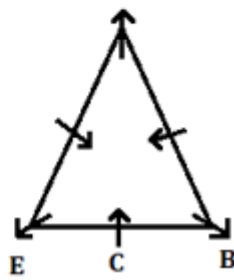
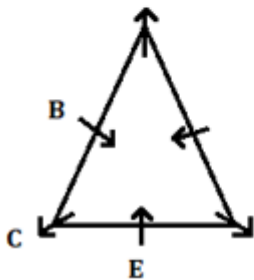
Solution: From the given statements, B sits immediate to the right of C. One person sits between B and E. Here we get 4 possibilities i.e., Case 1, Case 2, Case 3 and Case 4.



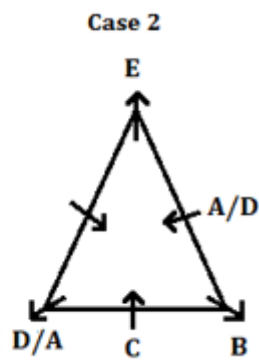
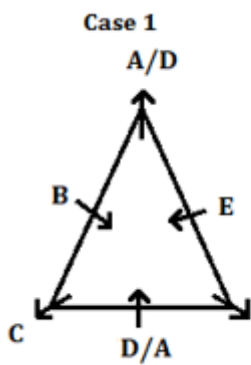
Case 3



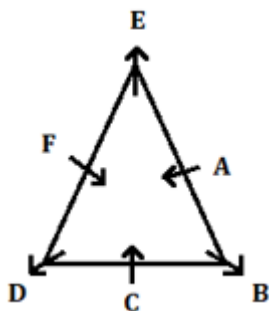
Case 4



Two persons sit between A and D. From this condition Case 3 and Case 4 are eliminated.



Both A and F are not sitting adjacent to each other. F does not sit any corner side of the table. Here Case 1 is ruled out now. So, the final arrangement-



coded inequalities

Direction(14-18): In the following questions assuming the given statement to be true, find which of the conclusion(s) among given conclusions is/are definitely true and then give your answers accordingly.

निर्देश: निम्नलिखित प्रश्नों में, दिए गए कथन/कथनों को सत्य मानते हुए, ये ज्ञात करें कि दिए गए निष्कर्षों में से कौन सा/से निष्कर्ष निश्चित रूप से सत्य है/हैं तथा तदनुसार अपने उत्तर दें।

14.

Statements:

$K \leq L > M, N = O \geq P, K > Q > N$

Conclusions:

I. $M > Q$

II. $M \geq K$

- Only I is true
- Only II is true
- Either I or II is true
- Neither I nor II is true
- Both I and II are true

14.कथन:

$K \leq L > M, N = O \geq P, K > Q > N$

निष्कर्ष:

I. $M > Q$

II. $M \geq K$

- केवल I सही है
- केवल II सही है
- या तो I या II सही है
- न तो I न ही II सही है
- दोनों I और II सही हैं

Solution:

Given statements: $K \leq L > M, N = O \geq P, K > Q > N$

On combining: $M < L \geq K > Q > N = O \geq P$

Conclusions:

I. $M > Q \rightarrow$ False (as $M < L \geq K > Q \rightarrow$ hence clear relation between M & Q cannot be determined).

II. $M \geq K \rightarrow$ False (as $M < L \geq K \rightarrow$ hence clear relation between M & K cannot be determined).

Hence, neither conclusion I nor II is true.

15. Statements:

$K \leq L > M, N = O \geq P, K > Q > N$

Conclusions:

I. $K = O$

II. $K > O$

- a. Only I is true
- b. Only II is true
- c. Either I or II is true
- d. Neither I nor II is true
- e. Both I and II are true

15. कथन:

$K \leq L > M, N = O \geq P, K > Q > N$

निष्कर्ष:

I. $K = O$

II. $K > O$

- a. केवल I सही है
- b. केवल II सही है
- c. या तो I या II सही है
- d. न तो I न ही II सही है

e. दोनों I और II सही हैं

Solution:

Given statements: $K \leq L > M, N = O \geq P, K > Q > N$

On combining: $M < L \geq K > Q > N = O \geq P$

Conclusions:

I. $K = O \rightarrow$ False (as $K > Q > N = O \rightarrow K > O$)

II. $K > O \rightarrow$ True (as $K > Q > N = O \rightarrow K > O$)

Hence, only conclusion II follows

16. Statements:

$K \leq L > M, N = O \geq P, K > Q > N$

Conclusions:

I. $L = K$

II. $L > K$

- Only I is true
- Only II is true
- Either I or II is true
- Neither I nor II is true
- Both I and II are true

16. कथन:

$K \leq L > M, N = O \geq P, K > Q > N$

निष्कर्ष:

I. $L = K$

II. $L > K$

- केवल I सही है
- केवल II सही है
- या तो I या II सही है
- न तो I न ही II सही है
- दोनों I और II सही हैं

Solution:

Given statements: $K \leq L > M, N = O \geq P, K > Q > N$

On combining: $M < L \geq K > Q > N = O \geq P$

Conclusions:

I. $L = K \rightarrow$ False (as $L \geq K \rightarrow$ hence clear relation between L & K cannot be determined).

II. $L > K \rightarrow$ False (as $L \geq K \rightarrow$ hence clear relation between L & K cannot be determined).

Here, conclusions I and II are complementary pair, so either conclusion I or II is true.

17. Statements:

$K \leq L > M, N = O \geq P, K > Q > N$

Conclusions:

I. $N \geq P$

II. $N > P$

- a. Only I is true
- b. Only II is true
- c. Either I or II is true
- d. Neither I nor II is true
- e. Both I and II are true

17. कथन:

$K \leq L > M, N = O \geq P, K > Q > N$

निष्कर्ष:

I. $N \geq P$

II. $N > P$

- a. केवल I सही है
- b. केवल II सही है
- c. या तो I या II सही है
- d. न तो I न ही II सही है

e. दोनों I और II सही हैं

Solution:

Given statements: $K \leq L > M, N = O \geq P, K > Q > N$

On combining: $M < L \geq K > Q > N = O \geq P$

Conclusions:

I. $N \geq P \rightarrow$ True (as $\rightarrow N = O \geq P \rightarrow N \geq P$)

II. $N > P \rightarrow$ False (as $\rightarrow N = O \geq P \rightarrow N \geq P$)

Hence, only conclusion I follows.

18. Statements:

$K \leq L > M, N = O \geq P, K > Q > N$

Conclusions:

I. $L > M$

II. $K > N$

- Only I is true
- Only II is true
- Either I or II is true
- Neither I nor II is true
- Both I and II are true

18. कथन:

$K \leq L > M, N = O \geq P, K > Q > N$

निष्कर्ष:

I. $L > M$

II. $K > N$

- केवल I सही है
- केवल II सही है
- या तो I या II सही है
- न तो I न ही II सही है
- दोनों I और II सही हैं

Solution:

Given statements: $K \leq L > M$, $N = O \geq P$, $K > Q > N$

On combining: $M < L \geq K > Q > N = O \geq P$

Conclusions:

I. $L > M \rightarrow$ True (as $\rightarrow M < L \rightarrow L > M$)

II. $K > N \rightarrow$ True (as $\rightarrow K > Q > N \rightarrow K > N$)

Hence, both conclusion I and conclusion II are true.

Alphanumeric series

Direction(19-23): Study the following arrangement carefully and answer the questions given below:

Direction: निम्नलिखित व्यवस्था का ध्यानपूर्वक अध्ययन कीजिये और नीचे दिए गए प्रश्नों के उत्तर दीजिये:
M 4 E T % J 9 O B @ U 8 © N # W F 1 V 7 * 2 A H 3 Y 5 \$ 6 K

19) Which of the following is the ninth to the right of the seventeenth from the right end of the above arrangement?

19) निम्नलिखित में से कौन उपरोक्त व्यवस्था के दायें छोर से 17 वें के दायें से नौवां है?

1. A
2. %
3. O
4. Y
5. इनमें से कोई नहीं

Solution: 9th to right of 17th from right = 8th from right = A

20) What should come in place of the question mark (?) in the following series based on the above arrangement?

20) उपरोक्त व्यवस्था के आधार पर निम्नलिखित श्रृंखला में प्रश्नवाचक चिन्ह (?) के स्थान पर क्या आना

चाहिए?

4T% 9B@ 8N# FV7 ?

1. 2 H 3

2. 2 H Y

3. * A H

4. * A 3

5. इनमें से कोई नहीं

Solution:2H3

21)Four of the following five are alike in a certain way based on their positions in the above arrangement and so form a group. Which is the one that does not belong to that group?

21)उपरोक्त व्यवस्था में अपनी स्थिति के आधार पर निम्नलिखित पांच में से चार एक निश्चित तरीके से समान हैं और एक समूह बनाते हैं। कौन सा एक उस समूह से संबंधित नहीं है?

1. J O T

2. 3 5 A

3. \$ K Y

4. A 3 *

5. 8 © @

Solution:8 © @

22)How many such vowels are there in the above arrangement, each of which is immediately preceded by a number and immediately followed by a consonant?

22)उपरोक्त व्यवस्था में ऐसे कितने स्वर हैं, जिनमें से प्रत्येक के ठीक पहले एक संख्या और ठीक बाद एक व्यंजन है?

1. None
कोई नहीं

2. One
एक

3. Two
दो

4. Three
तीन

5. Four
चार

Solution:4ET, 2AH, 9OB

23)How many such numbers are there in the above arrangement, each of which is immediately followed by a symbol and immediately preceded by a consonant?

23)उपरोक्त व्यवस्था में ऐसी कितनी संख्याएँ हैं, जिनमें से प्रत्येक के ठीक बाद एक प्रतीक और ठीक पहले एक व्यंजन है?

1. None
कोई नहीं

2. One
एक

3. Two
दो

4. Three
तीन

5. More than three
तीन से अधिक

Solution:V7*, Y5\$

Puzzles

Direction(24-29):Study the following information carefully and answer the questions given below.

Eight persons J, K, L, M, N, O, P and Q will have to attend the meeting in the August and September month. In each month, they will attend the meeting on different dates 1, 5, 15 and 17 of the given months.

J will attend the meeting on the 5th of September. Three persons will attend the meeting between J and P. More than two persons will attend the meeting between P and M. Two persons will attend the meeting between M and Q. Three persons will attend the meeting between Q and L. K will not attend the meeting immediately before or immediately after the dates on which Q attend the meeting. K will not attend the meeting on 15th September. Two persons will attend the meeting between N and O. N will attend the meeting in August month.

Direction: निम्नलिखित जानकारी का ध्यानपूर्वक अध्ययन कीजिये और नीचे दिए गए प्रश्नों के उत्तर दीजिये।

आठ व्यक्ति J, K, L, M, N, O, P और Q को अगस्त और सितंबर महीने में मीटिंग में भाग लेना है। प्रत्येक महीने में, वे दिए गए महीनों की विभिन्न तिथियों 1, 5, 15 और 17 को मीटिंग में भाग लेंगे। J, 5 सितंबर को मीटिंग में भाग लेगा। J और P के बीच मीटिंग में तीन व्यक्ति भाग लेंगे। P और M के बीच मीटिंग में दो से अधिक व्यक्ति भाग लेंगे। M और Q के बीच दो व्यक्ति मीटिंग में भाग लेंगे। Q और L के बीच तीन व्यक्ति मीटिंग में भाग लेंगे। K, जिस तिथि को Q मीटिंग में भाग लेता है, उसके ठीक पहले या ठीक बाद की मीटिंग में उपस्थित नहीं होगा। K, 15 सितंबर को मीटिंग में शामिल नहीं होगा। N और O के बीच मीटिंग में दो व्यक्ति भाग लेंगे। N, अगस्त महीने में मीटिंग में भाग लेगा।

24) Who among the following will attend the meeting on 5th August?

24) निम्नलिखित में से कौन 5 अगस्त को मीटिंग में भाग लेगा?

1. L
2. P
3. O
4. J
5. M

Solution: From the given statements, J will attend the meeting on 5th of September. Three persons will attend the meeting between J and P. More than two persons will attend the meeting between P and M. Two persons will attend the meeting between M and Q. Three persons will attend the meeting between Q and L. Here we get two possible cases-

Month	Date	Case 1	Case 2
		Persons	Persons
August	1	L	
	5	P	P
	15		
	17		Q
September	1	Q	
	5	J	J
	15		M
	17	M	L

K will not attend the meeting immediately before or immediately after the dates on which Q attend the meeting. K will not attend the meeting on 15th September. Two persons will attend the meeting between N and O. By this condition Case-2 will be cancelled. Also, N

will attend the meeting in August month. Final arrangement will be-

Month	Date	Persons
August	1	L
	5	P
	15	K
	17	N
September	1	Q
	5	J
	15	O
	17	M

25) How many persons will attend the meeting between P and O?

25) P और O के बीच मीटिंग में कितने व्यक्ति शामिल होंगे?

1. One

एक

2. Three

तीन

3. Five

पांच

4. Two

दो

5. Four

चार

Solution: From the given statements, J will attend the meeting on 5th of September. Three persons will attend the meeting between J and P. More than two persons will attend the meeting between P and M. Two persons will attend the meeting between M and Q. Three persons will attend the meeting between Q and L. Here we get two possible cases-

Month	Date	Case 1	Case 2
		Persons	Persons
August	1	L	
	5	P	P
	15		
	17		Q
September	1	Q	
	5	J	J
	15		M
	17	M	L

K will not attend the meeting immediately before or immediately after the dates on which Q attend the meeting. K will not attend the meeting on 15th September. Two persons will attend the meeting between N and O. By this condition Case-2 will be cancelled. Also, N will attend the meeting in August month. Final arrangement will be-

Month	Date	Persons
August	1	L
	5	P
	15	K
	17	N
September	1	Q
	5	J
	15	O
	17	M

26)Q will attend the meeting on which of the following day?

26)Q निम्नलिखित में से किस दिन मीटिंग में भाग लेगा?

1. 5th August

5 अगस्त

2. 1st August

1 अगस्त

3. 17th August

17 अगस्त

4. 17th September

17 सितम्बर

5. None of these
इनमें से कोई नहीं

Solution: From the given statements, J will attend the meeting on 5th of September. Three persons will attend the meeting between J and P. More than two persons will attend the meeting between P and M. Two persons will attend the meeting between M and Q. Three persons will attend the meeting between Q and L. Here we get two possible cases-

Month	Date	Case 1	Case 2
		Persons	Persons
August	1	L	
	5	P	P
	15		
	17		Q
September	1	Q	
	5	J	J
	15		M
	17	M	L

K will not attend the meeting immediately before or immediately after the dates on which Q attend the meeting. K will not attend the meeting on 15th September. Two persons will attend the meeting between N and O. By this condition Case-2 will be cancelled. Also, N will attend the meeting in August month. Final arrangement will be-

Month	Date	Persons
August	1	L
	5	P
	15	K
	17	N
September	1	Q
	5	J
	15	O
	17	M

27) If L is related to K and Q is related to O then in the same way N is related to?
27) यदि L, K से संबंधित है और Q, O से संबंधित है तो उसी प्रकार N किससे संबंधित है?

1. L

2. P

3. O

4. J

5. M

Solution: From the given statements, J will attend the meeting on 5th of September. Three persons will attend the meeting between J and P. More than two persons will attend the meeting between P and M. Two persons will attend the meeting between M and Q. Three persons will attend the meeting between Q and L. Here we get two possible cases-

Month	Date	Case 1	Case 2
		Persons	Persons
August	1	L	
	5	P	P
	15		
	17		Q
September	1	Q	
	5	J	J
	15		M
	17	M	L

K will not attend the meeting immediately before or immediately after the dates on which Q attend the meeting. K will not attend the meeting on 15th September. Two persons will attend the meeting between N and O. By this condition Case-2 will be cancelled. Also, N will attend the meeting in August month. Final arrangement will be-

Month	Date	Persons
August	1	L
	5	P
	15	K
	17	N
September	1	Q
	5	J
	15	O
	17	M

28) Who among the following will attend the meeting on 1st August?

28) निम्नलिखित में से कौन 1 अगस्त को मीटिंग में भाग लेगा?

1. L

- 2. P
- 3. O
- 4. N
- 5. M

Solution: From the given statements, J will attend the meeting on 5th of September. Three persons will attend the meeting between J and P. More than two persons will attend the meeting between P and M. Two persons will attend the meeting between M and Q. Three persons will attend the meeting between Q and L. Here we get two possible cases-

Month	Date	Case 1	Case 2
		Persons	Persons
August	1	L	
	5	P	P
	15		
	17		Q
September	1	Q	
	5	J	J
	15		M
	17	M	L

K will not attend the meeting immediately before or immediately after the dates on which Q attend the meeting. K will not attend the meeting on 15th September. Two persons will attend the meeting between N and O. By this condition Case-2 will be cancelled. Also, N will attend the meeting in August month. Final arrangement will be-

Month	Date	Persons
August	1	L
	5	P
	15	K
	17	N
September	1	Q
	5	J
	15	O
	17	M

Coding & Decoding

Direction (29 to 32): Study the following information carefully and answer the questions given below. In a certain code:

- 'Student online classes' is written as 'ru ri be',
- 'Exam postponed schemed' is written as 'ta no pa',
- 'Cancelled complete classes postponed' is written as 'do ri pa pi'
- 'Exam complete student online' is written as 'ru be do no'.

Direction : निम्नलिखित जानकारी का ध्यानपूर्वक अध्ययन करें और नीचे दिए गए प्रश्नों के उत्तर दें।
एक निश्चित कोड में:

'Student online classes' को 'ru ri be' लिखा जाता है

'Exam postponed schemed' को 'ta no pa' लिखा जाता है

'Cancelled complete classes postponed' को 'do ri pa pi' लिखा जाता है

'Exam complete student online' को 'ru be do no' लिखा जाता है

29) What is the code for 'online'?

29) 'online' के लिए कूट क्या है?

a) ri

b) be

c) ru

d) do

e) Can't be determined

निर्धारित नहीं किया जा सकता

Solution:

Words	Code
Classes	Ri
Student/online	be/ru
Postponed	Pa
Exam	No
Schemed	Ta
Complete	Do
Cancelled	Pi

30) What does 'ru' stand for?

30) 'ru' का क्या अर्थ है?

a) Student

b) Either (A) or (D)
या तो (A) या (D)

c) Classes

d) Online

e) None of these
इनमें से कोई नहीं

Solution:

Words	Code
Classes	Ri
Student/online	be/ru
Postponed	Pa
Exam	No
Schemed	Ta
Complete	Do
Cancelled	Pi

31) Which of the following is the code for 'Exam Postponed schemed Student Classes'?

31) निम्नलिखित में से कौन सा कूट 'Exam Postponed schemed Student Classes' के लिए है?

- a) no pa ri ta do
- b) ta ri pa no be
- c) ta no ru ri pa
- d) Either (b) or (c)
या तो (b) या (c)
- e) None of these
इनमें से कोई नहीं

Solution:

Words	Code
Classes	Ri
Student/online	be/ru
Postponed	Pa
Exam	No
Schemed	Ta
Complete	Do
Cancelled	Pi

32) Which of the following code stands for 'Postponed'?

32) निम्नलिखित में से कौन सा कूट 'Postponed' के लिए है?

- a) ri
- b) no
- c) pa

- d) do
- e) None of these
इनमें से कोई नहीं

Solution:

Words	Code
Classes	Ri
Student/online	be/ru
Postponed	Pa
Exam	No
Schemed	Ta
Complete	Do
Cancelled	Pi

Problems on Digits

Q.33 If in the number 78364925, 1 is added to each of the even digits and 1 is subtracted in each odd digits, then all digits are arranged in ascending order from left to right. Then which of the following digit is 5th from the right end?

30) यदि संख्या 78364925 में, प्रत्येक सम अंक में 1 जोड़ा जाता है और प्रत्येक विषम अंक से 1 घटाया जाता है, तो सभी अंकों को बाएं से दाएं आरोही क्रम में व्यवस्थित किया जाता है तो निम्नलिखित में से कौन सा अंक दायें छोर से 5वां है?

- a) 3
- b) 7
- c) 6
- d) 5
- e) 8

Solution:

Given Number-78364925

After applied given condition-69275834

Arranged in ascending order - 234 56789

Seating Arrangement

Direction(34-38): Study the following data carefully and answer the questions accordingly.

Seven people J, K, L, M, N, O, and P are sitting around a circular table facing outside the center. Two people sit between O and N. Two people sit between N and P. M sits immediate

right of L. N and M are not immediate neighbors. K and N are not immediate neighbors. At least two people sit between J and P from the left of J.

निर्देश:

निम्नलिखित जानकारी का ध्यानपूर्वक अध्ययन करें तथा तदनुसार प्रश्नों के उत्तर दें।

सात व्यक्ति अर्थात् J, K, L, M, N,

O और P केंद्र से बाहर की ओर मुख करके एक गोलाकार मेज की चारों ओर बैठे हैं। O और N के बीच दो व्यक्ति बैठे हैं। N और P के बीच दो व्यक्ति बैठे हैं। M, L की ठीक दाईं ओर बैठता है। N और M निकटतम पड़ोसी नहीं हैं। K और N निकटतम पड़ोसी नहीं हैं। J की बाईं ओर से J और P के बीच कम से कम दो व्यक्ति बैठे हैं।

34) Who sits immediate right of K?

- a) N
- b) J
- c) P
- d) O
- e) None of these

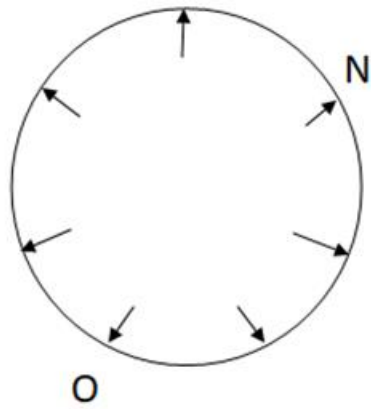
34) K की ठीक दाईं ओर कौन बैठता है?

- a) N
- b) J
- c) P
- d) O
- e) इनमें से कोई नहीं

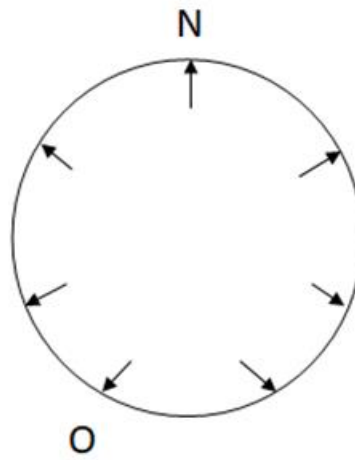
Solution:

1) Two people sit between O and N.

Case 1

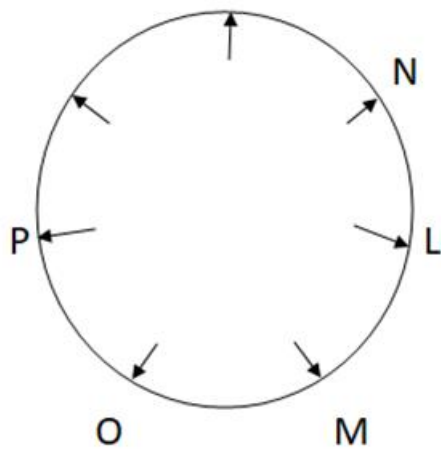


Case 2

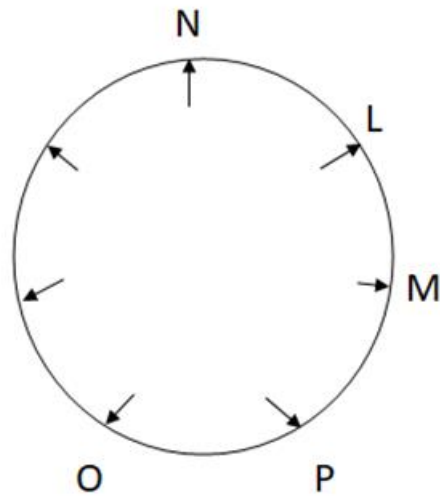


- 2) Two people sit between N and P.
- 3) M sits immediate right of L.
- 4) N and M are not immediate neighbors.

Case 1

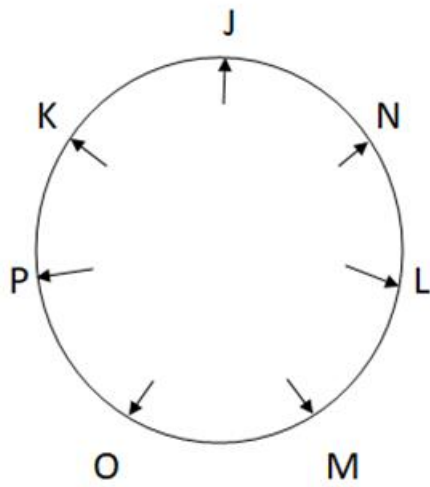


Case 2

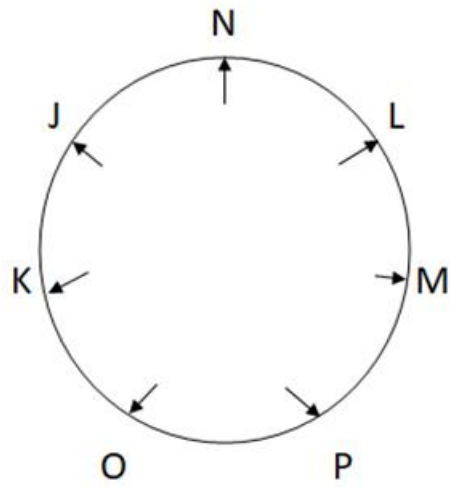


- 5) K and N are not immediate neighbors.

Case 1

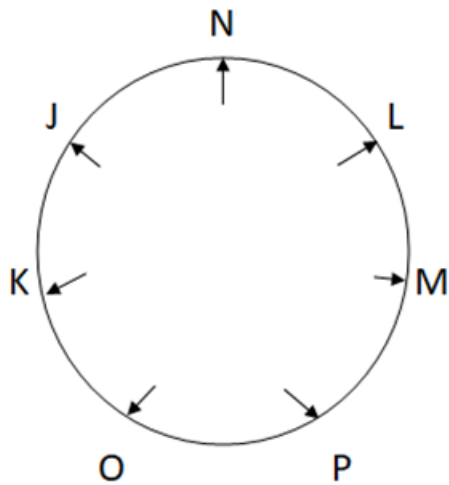


Case 2



6) At least two people sit between J and P from the left of J.

(Here, case 1 will be eliminated)



Therefore, option B is the correct answer.

35) Who sits third to the right of J?

- a) L
- b) P
- c) M
- d) O

e) No one

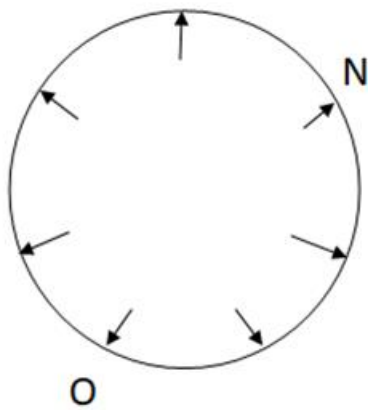
35) J की दाईं ओर से तीसरे स्थान पर कौन बैठा है?

- a) L
- b) P
- c) M
- d) O
- e) कोई नहीं

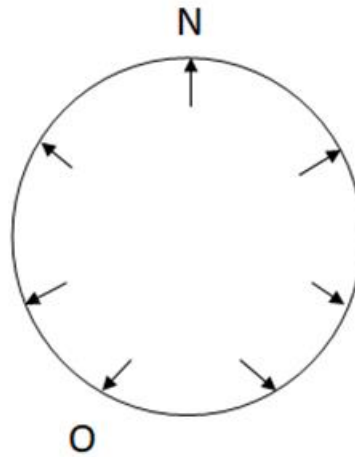
Solution:

1) Two people sit between O and N.

Case 1



Case 2

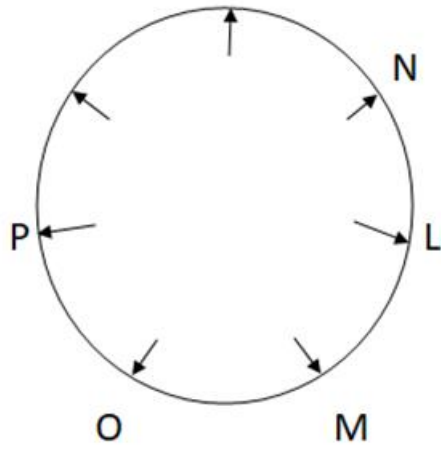


2) Two people sit between N and P.

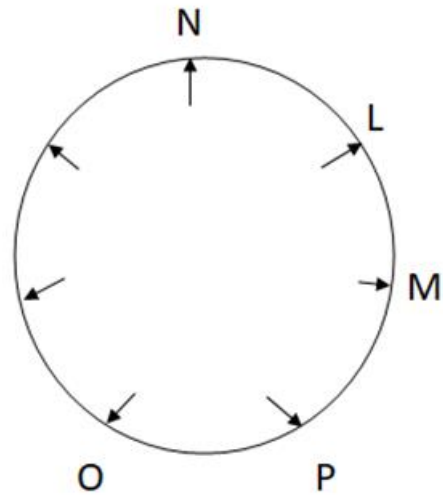
3) M sits immediate right of L.

4) N and M are not immediate neighbors.

Case 1

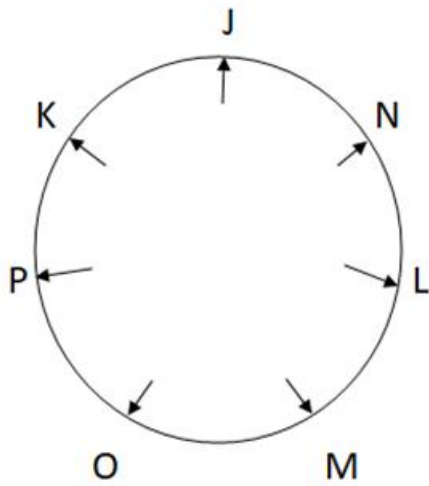


Case 2

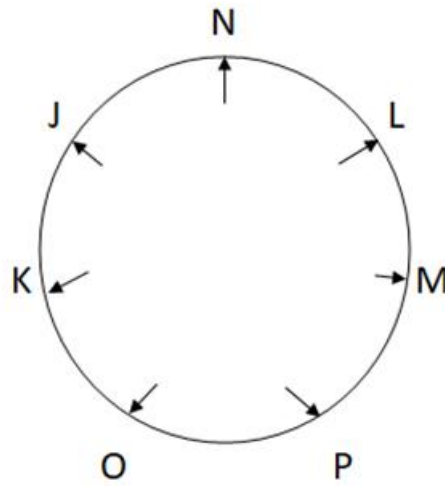


5) K and N are not immediate neighbors.

Case 1

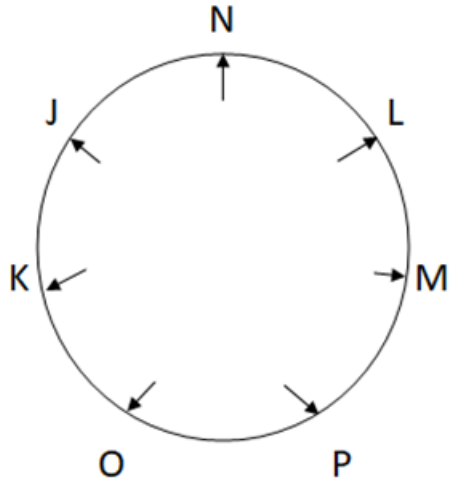


Case 2



6) At least two people sit between J and P from the left of J.

(Here, case 1 will be eliminated)



Therefore, option C is the correct answer.

36) Who sits between N and M, when counted from left of M?

- a) K
- b) P
- c) O
- d) L
- e) None of these

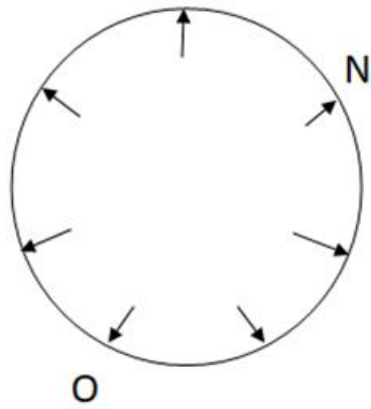
36) N और M के बीच कौन बैठा है, जब M की बाईं ओर से गणना की जाती है?

- a) K
- b) P
- c) O
- d) L
- e) इनमें से कोई नहीं

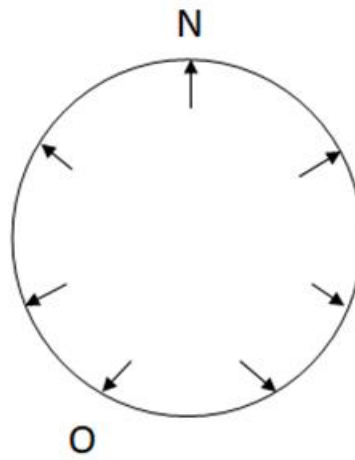
Solution:

1) Two people sit between O and N.

Case 1

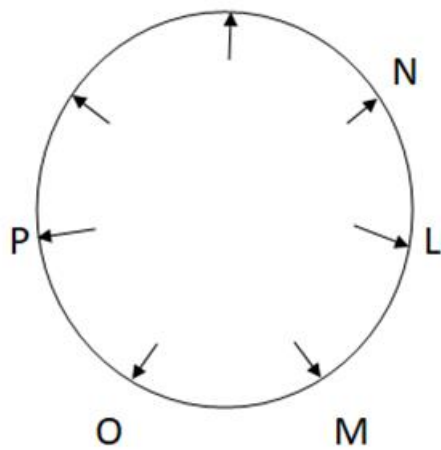


Case 2

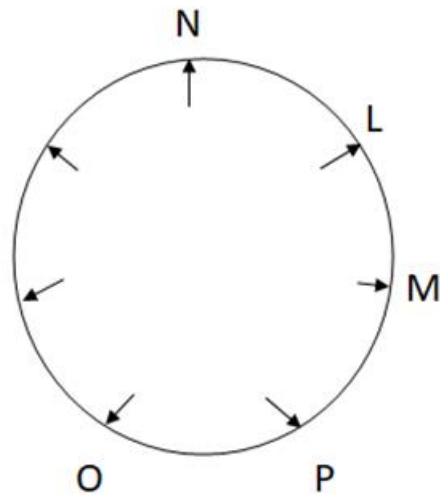


- 2) Two people sit between N and P.
- 3) M sits immediate right of L.
- 4) N and M are not immediate neighbors.

Case 1

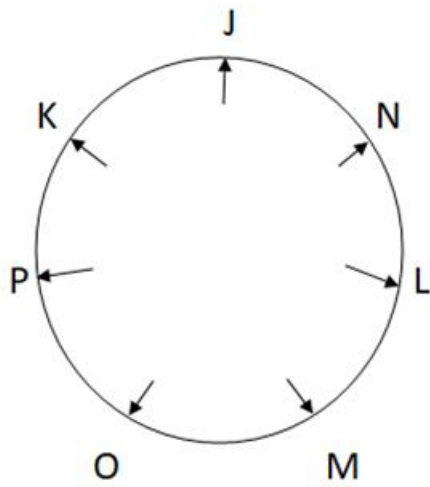


Case 2

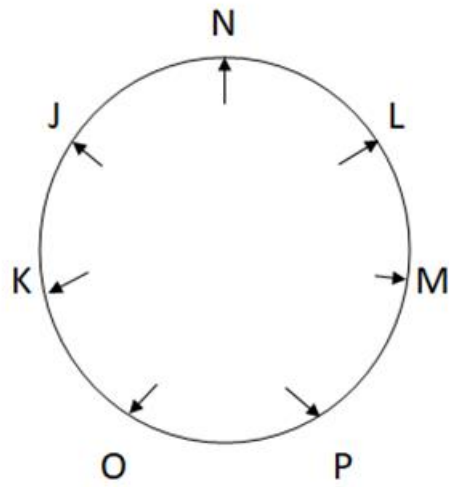


- 5) K and N are not immediate neighbors.

Case 1

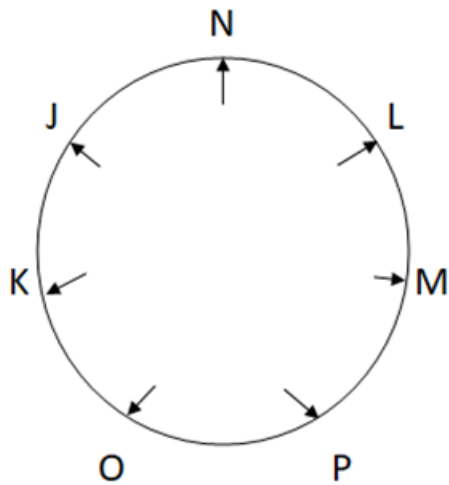


Case 2



6) At least two people sit between J and P from the left of J.

(Here, case 1 will be eliminated)



Therefore, option D is the correct answer.

37) What is the position of O from N?

- a) Third to the left
- b) Fourth to the left
- c) Third to the right
- d) Fifth to the right

e) None of these

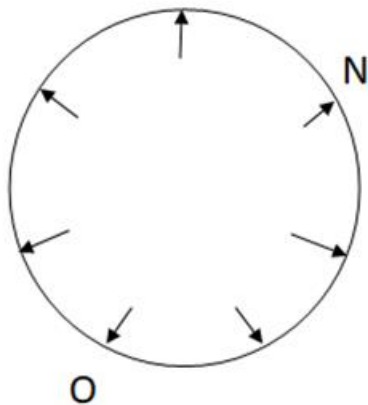
37) N से O की स्थिति क्या है?

- a) बाईं ओर से तीसरा
- b) बाईं ओर से चौथा
- c) दाईं ओर से तीसरा
- d) दाईं ओर से पांचवां
- e) इनमें से कोई नहीं

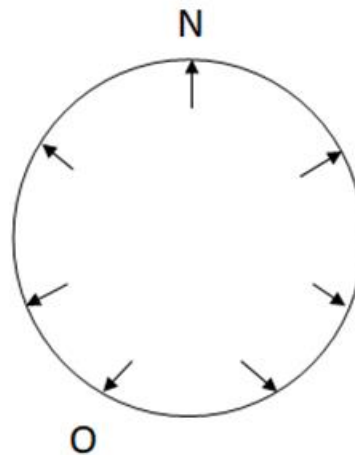
Solution:

1) Two people sit between O and N.

Case 1



Case 2

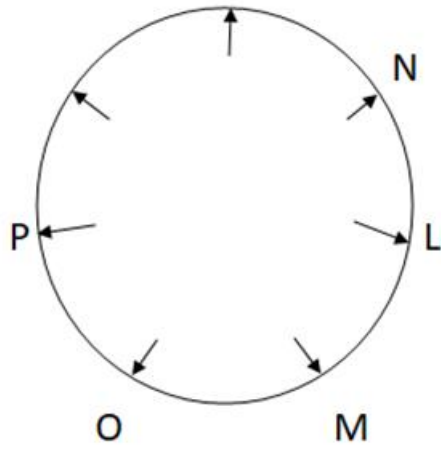


2) Two people sit between N and P.

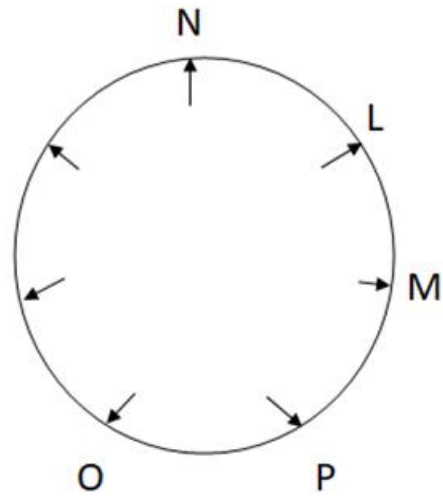
3) M sits immediate right of L.

4) N and M are not immediate neighbors.

Case 1

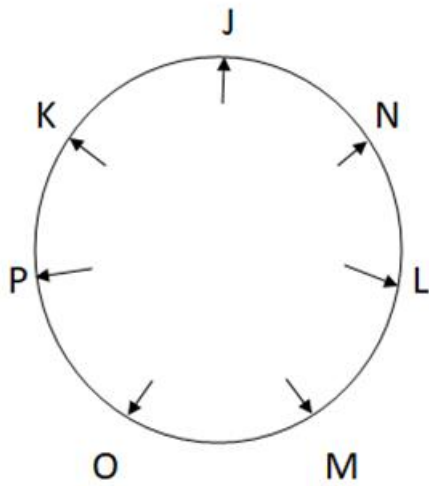


Case 2

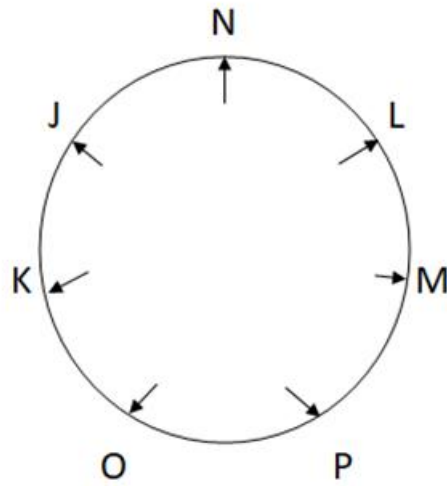


5) K and N are not immediate neighbors.

Case 1

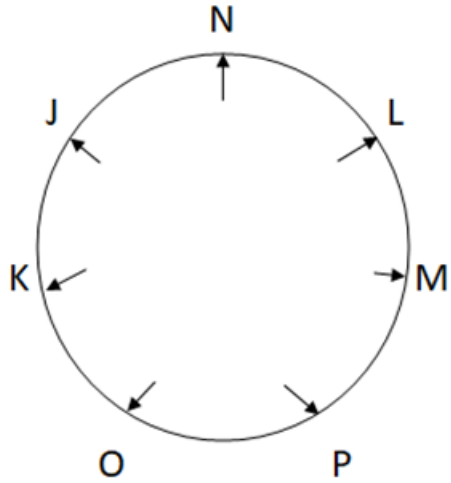


Case 2



6) At least two people sit between J and P from the left of J.

(Here, case 1 will be eliminated)



Therefore, option A is the correct answer.

38) Find the odd one.

- a) M, N
- b) O, J
- c) K, P
- d) P, N
- e) L, J

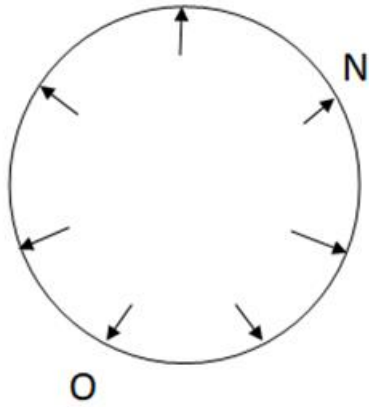
38) विषम पद ज्ञात करें।

- a) M, N
- b) O, J
- c) K, P
- d) P, N
- e) L, J

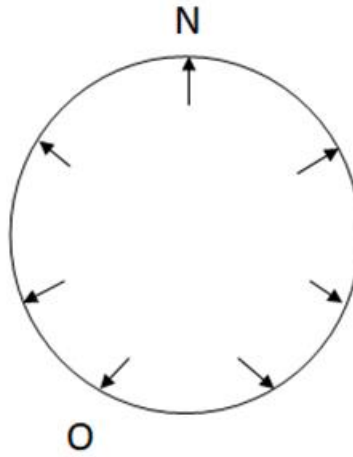
Solution:

- 1) Two people sit between O and N.

Case 1



Case 2

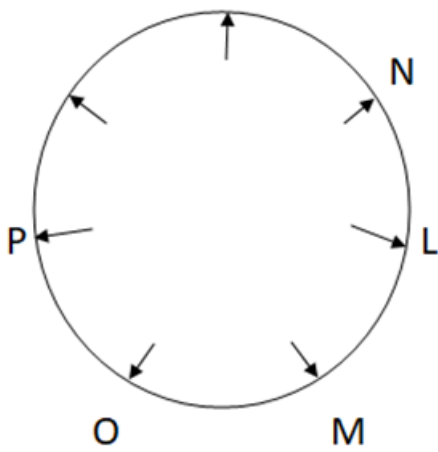


2) Two people sit between N and P.

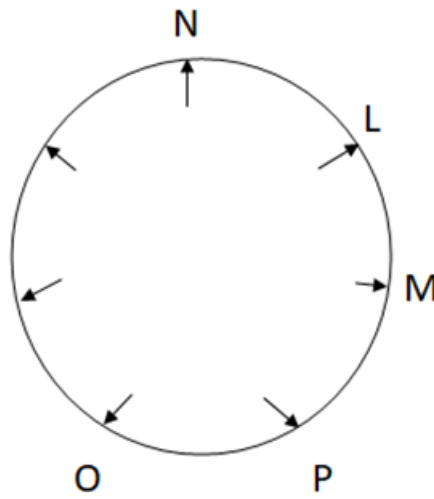
3) M sits immediate right of L.

4) N and M are not immediate neighbors.

Case 1

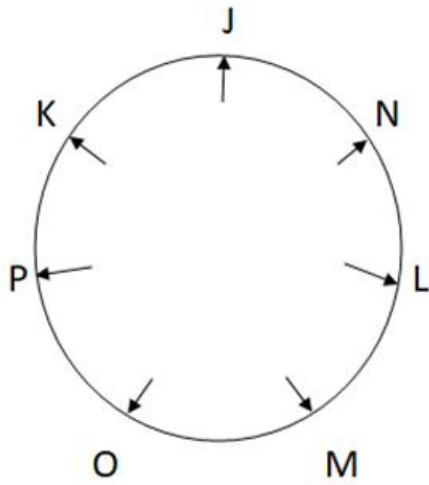


Case 2

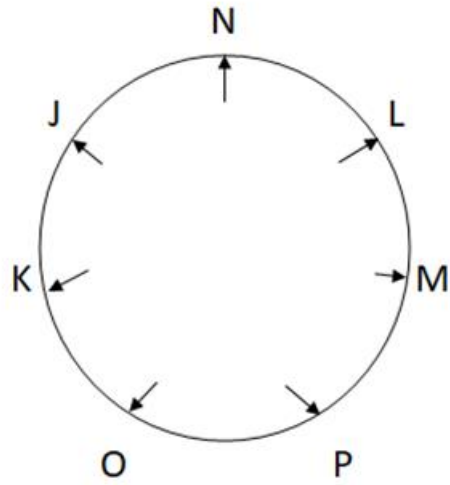


5) K and N are not immediate neighbors.

Case 1

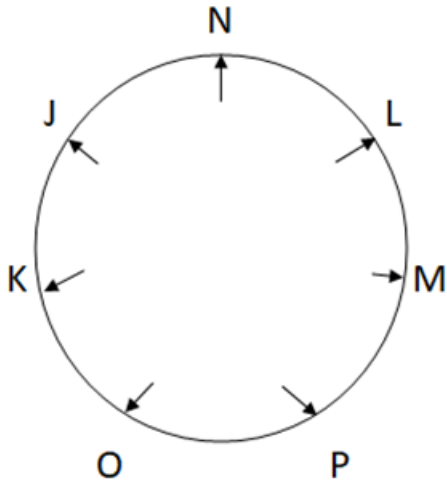


Case 2



6) At least two people sit between J and P from the left of J.

(Here, case 1 will be eliminated)



Therefore, option D is the correct answer.

Alphanumeric series

Direction (39-40): Study the sequence carefully and answer the questions given below.

4 1 \$ © 0 π 9 & £ 6 Ω @ 9 ≠ 2 7 ∞ 8 5 € # 6 μ 5 ¥ 4 ∑ 8 α 3 β 7 2 % 3

निर्देश: अनुक्रम का ध्यानपूर्वक अध्ययन करें तथा नीचे दिए गए प्रश्नों के उत्तर दें।

4 1 \$ © 0 π 9 & £ 6 Ω @ 9 ≠ 2 7 ∞ 8 5 € #
6 μ 5 ¥ 4 ∑ 8 α 3 β 7 2 % 3

39) How many odd numbers are there between the third element from left end and fourth symbol from the right end?

- a) Two
- b) Three
- c) More than five
- d) Five

39) बाएं छोर से तीसरे तत्व और दाएं छोर से चौथे प्रतीक के मध्य कितनी विषम संख्याएं हैं?

- a) दो
- b) तीन
- c) पांच से अधिक
- d) पांच

Solution: d

4 1 \$ © 0 π 9 & £ 6 Ω @ 9 ≠ 2 7 ∞ 8 5 € # 6 μ 5 ¥ 4 ∑ 8 α 3 β 7 2 % 3

Clearly, five odd numbers are there between the third element from left end and fourth symbol from the right end.

40) Which of the following elements is exactly between the 10th element from left end and 12th element from right end?

- a) 2
- b) ∞
- c) 7
- d) 8
- e) None of these

40) निम्न में से कौन सा तत्व बाएं छोर से 10वें तत्व और दाएं छोर से 12वें तत्व के ठीक मध्य में है?

- a) 2
- b) ∞
- c) 7
- d) 8
- e) इनमें से कोई नहीं

Solution: b

4 1 \$ © 0 π 9 & £ 6 Ω @ 9 ≠ 2 7 ∞ 8 5 € # 6 μ 5 ¥ 4 Σ 8 α 3 β 7 2 % 3

Clearly, ' ∞ ' is exactly between the 10th element from left end and 12th element from right end.

Numerical ability

Simplification

Direction (41-47): What value should come in place of the question mark (?) in the following question?

निर्देश(41-47): निम्नलिखित प्रश्न में प्रश्न चिन्ह (?) के स्थान पर कौन सा मान आना चाहिए?

41. 26% of 750 – 17% of 460 = ?

- a) 122.7
- b) 114.9
- c) 107.7
- d) 116.8
- e) 126.8

Solution:

26% of 750 – 17% of 460 = ?

$$\Rightarrow ? = \frac{26}{100} \times 750 - \frac{17}{100} \times 460$$

$$\Rightarrow ? = 195 - 78.2 = 116.8$$

42. $(\sqrt{121} \times 25) \div 44 - ? = 1.25$

- a) 8
- b) 6
- c) 7
- d) 5
- e) None of these

Solution:

$$(\sqrt{121} \times 25) \div 44 - ? = 1.25$$

$$\Rightarrow (11 \times 25) \div 44 - 1.25 = ?$$

$$\Rightarrow 6.25 - 1.25 = ?$$

$$\Rightarrow ? = 5$$

43. $2530 \div ? \div 10 = 12.65$

- a) 25
- b) 20
- c) 31
- d) 30
- e) 40

Solution:

$$2530 \div ? \div 10 = 12.65$$

$$\Rightarrow \frac{2530}{10 \times ?} = 12.65$$

$$\Rightarrow 2530 = 126.5 \times ?$$

$$\Rightarrow ? = 20$$

44. $4 \times 5^2 - 3^2 \times 7 + 6^2 = ? + 24$

- a) 7^2
- b) 8^2
- c) 9^2
- d) 4^2
- e) 3^2

Solution:

$$\begin{aligned}
4 \times 5^2 - 3^2 \times 7 + 6^2 &= ? + 24 \\
\Rightarrow ? &= 4 \times 25 - 9 \times 7 + 36 - 24 \\
\Rightarrow ? &= 100 - 63 + 36 - 24 \\
\Rightarrow ? &= 49 \\
\Rightarrow ? &= 7^2
\end{aligned}$$

45. $? = (5)^3 - 3 + (4)^2 + (7)^2$

- 185
- 190
- 191
- 187
- 201

Solution:

$$\begin{aligned}
? &= 5^3 - 3 + 4^2 + 7^2 \\
&= 125 - 3 + 16 + 49 \\
&= 187
\end{aligned}$$

46. $(840 \div 6 \div 4 + 79) - 1316 \div (19 \times 5 - 48) = ?$

- 611
- 75
- 86
- 90
- 95

Solution:

$$\begin{aligned}
(840 \div 6 \div 4 + 79) - 1316 \div (19 \times 5 - 48) &= ? \\
\Rightarrow (35 + 79) - 1316 \div (47) &= ? \\
\Rightarrow (35 + 79) - 28 &= ? \\
\Rightarrow ? &= 86
\end{aligned}$$

47. $\sqrt{361} \times \sqrt{256} \div 4 = ? \times \sqrt{1444}$

- 1
- 2
- 4
- 5
- 6

Solution:

$$\sqrt{361} \times \sqrt{256} \div 4 = ? \times \sqrt{1444}$$

$$\Rightarrow 19 \times \frac{16}{4} = ? \times 38$$

$$\Rightarrow 19 \times 4 = ? \times 38$$

$$\Rightarrow ? = 2$$

Time and distance

48. A bike goes 30 km and returns 20 km in 6 hour and 4 hour respectively. Find the average speed of the bike.

- a) 4 km/h
- b) 3 km/h
- c) 6 km/h
- d) 2 km/h
- e) 5 km/h

48.

एक बाइक क्रमशः 6 घंटे और 4 घंटे में 30 किमी जाती है और 20 किमी वापस आती है। बाइक की औसत गति ज्ञात कीजिए।

- a) 4 किमी/घंटा
- b) 3 किमी/घंटा
- c) 6 किमी/घंटा
- d) 2 किमी/घंटा
- e) 5 किमी/घंटा

Solution:

According to the question,

$$\text{Average speed of the bike} = \frac{\text{Total distance travelled by bike}}{\text{Total time taken by the bike}}$$

$$\text{Or, Average speed of the bike} = \frac{30 + 20}{6 + 4} = 5 \text{ km/h}$$

Therefore, average speed of the bike is 5 km/h

Quadratic equation

49. Find the average of the roots of the quadratic equation $x^2 - 4 = 0$.

- a) 2
- b) -2
- c) -1
- d) -4
- e) 0

49.. द्विघात समीकरण $x^2 - 4 = 0$ के मूलों का औसत ज्ञात कीजिए।

- a) 2
- b) -2
- c) -1
- d) -4
- e) 0

Solution:

First we have to find the roots of the quadratic equation –

Since, $x^2 - 4 = 0$.

Or, $x = \pm 2$

Sum of the roots of the quadratic equation = $2 - 2 = 0$

Therefore, average of the roots of the quadratic equation is 0.

Simple Interest

50. The ratio of Principal and Amount after one year is 5 : 10, then the rate of interest per annum is?

- a) 50%
- b) 75%
- c) 100%
- d) 70%
- e) None of these

50. एक वर्ष के बाद मूलधन और धनराशि का अनुपात 5 : 10 है, तब प्रतिवर्ष ब्याज दर क्या है?

- a) 50%

- b) 75%
- c) 100%
- d) 70%
- e) इनमें से कोई नहीं

Solution:

Let Principal = 5x

Amount = 10x

Therefore interest = (10x – 5x) = 5x

$$\text{Rate of Interest per annum} = \frac{5x}{5x} \times 100 = 100\%$$

Mixture & allegations

51) Two vessels X and Y of mixture water and syrup in the ratio of 4: 5 and 5: 7 respectively. If they are mixed in the ratio of 2: 3, then find the ratio of water and syrup in the final mixture.

51) पानी और सिरप के मिश्रण के दो बर्तन X और Y क्रमशः 4: 5 और 5: 7 के अनुपात में हैं। यदि उन्हें 2:3 के अनुपात में मिलाया जाता है, तो अंतिम मिश्रण में पानी और सिरप का अनुपात ज्ञात कीजिए।

- 1. 77: 103
- 2. 61: 59
- 3. 73: 87
- 4. 81: 109
- 5. 97: 73

Solution:

Let quantity of mixture X and Y be 72 lit and 108 lit respectively.

ATQ

$$\text{Quantity of water in mixture X} = 72 \times \frac{4}{9} = 32 \text{ lit}$$

$$\text{Quantity of syrup in mixture X} = 72 - 32 = 40 \text{ lit}$$

$$\text{Quantity of water in mixture Y} = 108 \times \frac{5}{12} = 45 \text{ lit}$$

$$\text{Quantity of syrup in mixture Y} = 108 - 45 = 63 \text{ lit}$$

$$\begin{aligned} \text{So, required ratio} &= \frac{32+45}{40+63} \\ &= \frac{77}{103} \end{aligned}$$

Pipes and Cistern

52) Pipe A, B and C together fill a tank in 8 hours. All the pipes are opened together. After 4 hours pipe B closed and remaining part of the tank filled by pipe A and C in 6 hours. Find the time taken by pipe B alone to fill the tank.

52) पाइप A, B और C मिलकर एक टैंक को 8 घंटे में भरते हैं। सभी पाइप एक साथ खोले जाते हैं। 4 घंटे के बाद पाइप B को बंद किया जाता है और पाइप A और C द्वारा टैंक का शेष भाग 6 घंटे में भर जाता है। टैंक को भरने के लिए अकेले पाइप B द्वारा लिया गया समय ज्ञात कीजिए।

1. 24 hours

24 घंटे

2. 18 hours

18 घंटे

3. 36 hours

36 घंटे

4. 30 hours

30 घंटे

5. 20 hours

20 घंटे

Solution:

Pipe A, B and C fill the empty tank in 8 hours.

All the pipe are opened together for 4 hours, so half tank is filled .

Half tank filled by A, B, C = 4 hours

And half tank filled filed by A and C in = 6 hours

Let capacity of half tank be 12 units.

So, efficiency of pipe A, B and C together and pipe A and C together is 3 units/hour and 2 units per hours respectively.

Therefore, efficiency of pipe B = 1 units/hour

Time taken by pipe B to fill half tank = $1 \times 12 = 12 \text{ hours}$

So, required time = $12 \times 2 = 24 \text{ hours}$

Compound interest

53) Anurag invested Rs. 15000 in scheme A at SI for 2 years at 15% per annum. If he again invests the total amount received from scheme A in scheme B at compound interest at 20% per annum for 2 years, then find the interest obtained in scheme B.

53) अनुराग ने योजना A में साधारण ब्याज पर 2 वर्ष के लिए 15% प्रति वर्ष की दर से 15000 रुपये का निवेश किया। यदि वह योजना A से प्राप्त कुल राशि को योजना B में 20% प्रति वर्ष चक्रवृद्धि ब्याज पर 2 वर्ष के लिए दोबारा निवेश करता है, तो योजना B में प्राप्त ब्याज ज्ञात कीजिए।

1. Rs. 7260
2. Rs. 4850
3. Rs. 5860
4. Rs. 8580
5. Rs. 6390

Solution:

$$\text{Amount received from scheme A} = 15000 + \frac{15000 \times 15 \times 2}{100}$$
$$= 19500$$

ATQ

$$\text{Interest received from scheme B} = 19500 \left[\left(1 + \frac{20}{100} \right)^2 - 1 \right]$$
$$= 19500 \times \frac{11}{25}$$
$$= \text{Rs. } 8580$$

Profit & loss

54) Aman and Amit started a business. The ratio of time invested by Aman and Amit is 9:13 and ratio of time invested by them 4:5 respectively. If the total profit is Rs. 25250, then find the profit share of Aman.

54) अमन और अमित ने एक व्यवसाय शुरू किया। अमन और अमित द्वारा निवेश किए गए समय का अनुपात क्रमशः 9:13 है और उनके द्वारा निवेश किए गए समय का अनुपात क्रमशः 4:5 है। यदि कुल लाभ 25250 रुपये है, तो अमन का लाभ हिस्सा ज्ञात कीजिए।

1. Rs. 11250
2. Rs. 9000
3. Rs. 8750

4. Rs. 12000

5. Rs. 13500

Solution:

$$\begin{aligned}\text{Ratio of profit share of Aman and Amit} &= 9 \times 4 : 13 \times 5 \\ &= 36 : 65\end{aligned}$$

$$\text{So, required amount} = \frac{36}{101} \times 25250 = 9000$$

Percentage

55) A shopkeeper marked up the price of an article by 60% and then give two successive discounts of 20% and 10% and sold the article at Rs. 1152. Find the cost price of the article.

55) एक दुकानदार ने एक वस्तु की कीमत में 60% की वृद्धि की और फिर 20% और 10% की दो क्रमिक छूट दी और वस्तु को 1152 रुपये में बेच दिया। वस्तु का क्रय मूल्य ज्ञात कीजिए।

1. Rs. 1000

2. Rs. 840

3. Rs. 1050

4. Rs. 960

5. Rs. 1100

Solution:

Let cost price of the article be Rs. $100x$.

$$\text{Marked price of the article} = 100x \times \frac{160}{100} = 160x$$

$$\text{Selling price of the article} = 160x \times \frac{80}{100} \times \frac{90}{100} = 115.2x$$

ATQ

$$115.2x = 1152$$

$$x = 10$$

$$\text{So, cost price of article} = 100x = \text{Rs. } 1000$$

Number Series

Direction(56-60): Find out the wrong term in the given series.

Direction(56-60): दी गई श्रंखला में गलत पद ज्ञात कीजिए।

56)

344, 217, 126, 63, 28, 9, 2

1. 344

2. 217

3. 63

4. 9

5. 28

Solution:

Wrong number = **63**

Here the pattern is:

$$7^3 + 1 = 344$$

$$6^3 + 1 = 217$$

$$5^3 + 1 = 126$$

$$4^3 + 1 = 65$$

$$3^3 + 1 = 28$$

$$2^3 + 1 = 9$$

$$1^3 + 1 = 2$$

57)

2, 6, 12, 20, 30, 45, 56

1. 6

2. 12

3. 20

4. 30

5. 45

Solution:

Wrong number = **45**

Here the pattern is:

$$2+4 = 6$$

$$6+6 = 12$$

$$12+8 = 20$$

$$20+10 = 30$$
$$30+12 = 42$$
$$42 + 14 = 56$$

58)

157, 201, 245, 289, 332, 377, 421

1. 377

2. 332

3. 289

4. 245

5. 157

Solution:

Wrong number = 332

Here the pattern is:

$$157+44 = 201$$

$$201+44 = 245$$

$$245+44 = 289$$

$$289+44 = 333$$

$$333+44 = 377$$

$$377 + 44 = 421.$$

59)

64, 34, 36, 56, 114 , 287, 860

1. 114

2. 860

3. 64

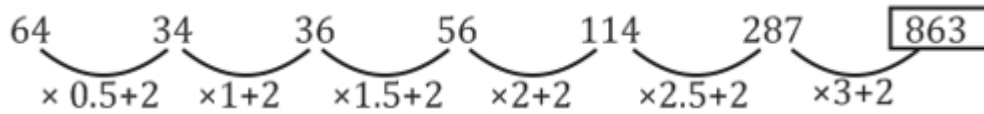
4. 36

5. 56

Solution:

Wrong number = **860**.

Here the pattern is



60)

49, 100, 202, 406, 814, 1633, 3262

1. 100

2. 3262

3. 406

4. 814

5. 1633

Solution:

Wrong number = 1633

Here the pattern is:

$$49 \times 2 + 2 = 100$$

$$100 \times 2 + 2 = 202$$

$$202 \times 2 + 2 = 406$$

$$406 \times 2 + 2 = 814$$

$$814 \times 2 + 2 = 1630$$

$$1630 \times 2 + 2 = 3262$$

Data Interpretation

Direction (61 to 65) :The given table shows the data related to five students and the total number of movies watched by them during a period of ten years.

Total number of movies = Number of Hollywood movies + Number of Bollywood movies.

दी गयी तालिका, पांच विद्यार्थियों से सम्बंधित आंकड़ों और दस वर्षों की अवधि के दौरान उनके द्वारा देखी गयी फिल्मों की कुल संख्या को दर्शाती है।
 फिल्मों की कुल संख्या = हॉलीवुड फिल्मों की संख्या + बॉलीवुड फिल्मों की संख्या

Students	Total number of movies watched	Ratio of Hollywood to Bollywood movies
A	350	4 : 3
B	400	11 : 9
C	250	3 : 7
D	200	13 : 12
E	375	16 : 9

विद्यार्थी	देखी गयी फिल्मों की कुल संख्या	हॉलीवुड का बॉलीवुड फिल्मों से अनुपात
A	350	4 : 3
B	400	11 : 9
C	250	3 : 7
D	200	13 : 12
E	375	16 : 9

61) What is average number of Bollywood movies watched by students A, B and D together?

61) A, B और D विद्यार्थियों द्वारा मिलाकर देखी गयी बॉलीवुड फिल्मों की औसत संख्या कितनी है?

- a) 132
- b) 138
- c) 142
- d) 144
- e) 146

Solution:

$$\text{Required average} = \frac{350 \times \frac{3}{7} + 400 \times \frac{9}{20} + 200 \times \frac{12}{25}}{3} = \frac{150 + 180 + 96}{3} = 142$$

62) The total number of Hollywood movies watched by student E is what percent more/less than the total number of movies watched by student B?

62) विद्यार्थी E द्वारा देखी गई हॉलीवुड फिल्मों की कुल संख्या, विद्यार्थी B द्वारा देखी गई फिल्मों की कुल संख्या से कितने प्रतिशत अधिक/कम है?

- a) 40%
- b) 45%
- c) 35%
- d) 30%
- e) 50%

Solution:

Total number of Hollywood movies watched by student

$$E = 375 \times \frac{16}{25} = 240$$

$$\text{Required percentage} = \frac{(400-240)}{400} \times 100 = \frac{160}{400} \times 100 = 40\%$$

63) The total number of Hollywood movies watched by students C and B together is how much more/less than the total number of Bollywood movies watched by student D & E together?

63) विद्यार्थी C और B द्वारा मिलाकर देखी गई हॉलीवुड फिल्मों की कुल संख्या, विद्यार्थी D और E द्वारा मिलाकर देखी गई बॉलीवुड फिल्मों की कुल संख्या से कितनी अधिक/कम है?

- a) 54
- b) 74
- c) 60
- d) 64
- e) 70

Solution:

Total number of Hollywood movies watched by students C and B together = $250 \times \frac{3}{10} + 400 \times \frac{11}{20}$
 $= 75 + 220 = 295$

Total number of Bollywood movies watched by students D and E together = $\frac{200 \times 12}{25} + \frac{375 \times 9}{25}$
 $= 96 + 135 = 231$

Required difference = $295 - 231 = 64$

64) Find the ratio of total number of movies watched by student C & D together to the number of Bollywood movies watched by B, C and E together?

64) विद्यार्थी C और D द्वारा मिलाकर देखी गई फिल्मों की कुल संख्या का, B, C और E द्वारा मिलाकर देखी गई बॉलीवुड फिल्मों की संख्या से अनुपात ज्ञात कीजिए।

- a) 49 : 45
- b) 45 : 49
- c) 90 : 97
- d) 10 : 11
- e) 9 : 11

Solution:

$$\text{Required ratio} = \frac{250+200}{\frac{400 \times 9}{20} + \frac{250 \times 7}{10} + \frac{875 \times 9}{25}} = \frac{450}{490}$$

$$= 45 : 49$$

65) The average of total number of movies watched by B and D is what percent of the average of total number of movies watched by A and C.

65) B और D द्वारा देखी गयी फिल्मों की कुल संख्या का औसत, A और C द्वारा देखी गयी फिल्मों की कुल संख्या के औसत का कितने प्रतिशत है?

- a) 125%
- b) 75%
- c) 80%
- d) 120%
- e) 100%

Solution:

$$\text{Required percentage} = \frac{(400+200)}{(350+250)} \times 100 = 100\%$$

Number Series

Direction (66-71): What should come in place of the question mark (?) in the following number series?

□□□□□□□:

□□□□□□□□ □□□□□ □□□□□□□□ □□□ □□□□□□ □□□□□ (?) □□ □□□□
□ □□ □□□□ □□□ □□□□□?

66) 10, 14, 23, 39, ?, 100

- a) 72
- b) 61
- c) 64
- d) 59

Solution: C

The pattern of the series is:

$$10 + 2^2 = 14$$

$$14 + 3^2 = 23$$

$$23 + 4^2 = 39$$

$$39 + 5^2 = 64$$

$$64 + 6^2 = 100$$

Hence, the missing number is 64.

67) 6, 6, 9, 18, 45, ?

- a) 153
- b) 125
- c) 135
- d) 145

Solution: C

The pattern of the series is:

$$6 \times 1 = 6$$

$$6 \times 1.5 = 9$$

$$9 \times 2 = 18$$

$$18 \times 2.5 = 45$$

$$45 \times 3 = 135$$

Hence, the missing number is 135.

68) 65, 66, 64, 67, 63, ?, 62

- a) 67
- b) 66
- c) 68
- d) 65

Solution: C

The pattern of the series is:

$$65 + 1 = 66$$

$$66 - 2 = 64$$

$$64 + 3 = 67$$

$$67 - 4 = 63$$

$$63 + 5 = 68$$

$$68 - 6 = 62$$

Hence, the missing number is 68.

69) 2, 3, 8, 27, 112, ?

- a) 534
- b) 587
- c) 493
- d) 565

Solution: D

The pattern of the series is:

$$2 \times 1 + 1 = 3$$

$$3 \times 2 + 2 = 8$$

$$8 \times 3 + 3 = 27$$

$$27 \times 4 + 4 = 112$$

$$112 \times 5 + 5 = 565$$

Hence, the missing number is 565.

70) 80, 84, 90, 98, 108, ?

a) 116

b) 120

c) 125

d) 133

Solution: B

The pattern of the series is:

$$80 + 4 = 84$$

$$84 + 6 = 90$$

$$90 + 8 = 98$$

$$98 + 10 = 108$$

$$108 + 12 = 120$$

Hence, the missing number is 120.

71) 880, 440, 220, ?, 55, 27.5

a) 110

b) 102

c) 97

d) 115

Solution: A

The pattern of the series is:

$$880 \times 0.5 = 440$$

$$440 \times 0.5 = 220$$

$$220 \times 0.5 = 110$$

$$110 \times 0.5 = 55$$

$$55 \times 0.5 = 27.5$$

Hence, the missing number is 110.

Data Interpretation

Direction (72 to 76): Read the given data carefully and answer the following questions.

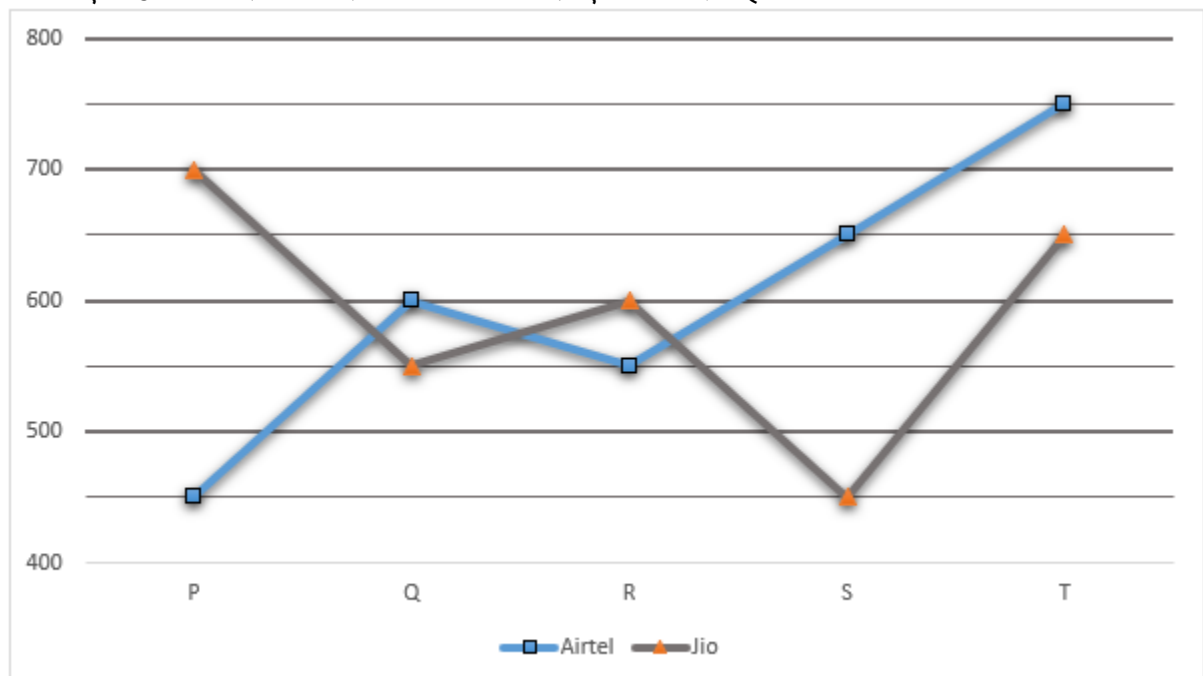
The line graph given below shows the user of Airtel and Jio network in 5 different villages.

Note – One user only has one connection of network.

Direction : दिए गए डेटा को ध्यान से पढ़िए और निम्नलिखित प्रश्नों के उत्तर दीजिये।

नीचे दिया गया लाइन ग्राफ 5 अलग-अलग गांवों में एयरटेल और जियो नेटवर्क के उपयोगकर्ता को दर्शाता है।

नोट - एक उपयोगकर्ता के पास नेटवर्क का केवल एक कनेक्शन है।



72) The no. of users of Jio in village S is what percentage of no. of users of Airtel in P and R together.

72) गाँव S में जियो के उपयोगकर्ताओं की संख्या, P और R में मिलाकर एयरटेल के उपयोगकर्ताओं की संख्या का कितना प्रतिशत है।

- a) 60%
- b) 30%
- c) 45%
- d) 33.33%
- e) 50%

Solution:

$$\begin{aligned}\text{Required percentage} &= \frac{450}{450+550} \times 100 \\ &= 45\%\end{aligned}$$

73) Average no. of users of Airtel in Q, S and R is how much more or less than average no. of users of Jio in all the 5 villages.

73) Q, S और R में एयरटेल के उपयोगकर्ताओं की औसत संख्या, सभी 5 गाँवों में जियो के उपयोगकर्ताओं की औसत संख्या से कितनी अधिक या कम है।

- a) 10
- b) 0
- c) 5
- d) 15
- e) 20

Solution:

$$\begin{aligned}\text{Average no. of Airtel users in Q, S and R} \\ &= \frac{600 + 650 + 550}{3} = 600\end{aligned}$$

$$\begin{aligned}\text{Average no. of Jio users in all 5 villages} \\ &= \frac{700+550+600+450+650}{5} = 590\end{aligned}$$

$$\text{So, required difference} = 600 - 590 = 10$$

74) Find the ratio of Airtel users in village R and T together to Jio users in village P and S together.

74) गाँव R और T में मिलाकर एयरटेल उपयोगकर्ताओं का गाँव P और S में मिलाकर जियो उपयोगकर्ताओं से अनुपात ज्ञात कीजिए।

- a) 17: 14
- b) 19: 15
- c) 21: 24
- d) 17: 13
- e) 26: 23

Solution:

$$\text{Required average} = \frac{550+750}{700+450} = \frac{1300}{1150}$$

$$= 26: 23$$

75) The no. of users of Jio in village Q is what percentage more or less than no. of users of Airtel in same village.

75) गाँव Q में जियो के उपयोगकर्ताओं की संख्या, समान गाँव में एयरटेल के उपयोगकर्ताओं की संख्या से कितने प्रतिशत अधिक या कम है।

- a) 7.5%
- b) 25%
- c) 12.5%
- d) $8\frac{1}{3}\%$
- e) $5\frac{1}{3}\%$

Solution:

$$\text{Required percentage} = \frac{600-550}{600} \times 100 = 8\frac{1}{3}\%$$

76) In village T, only three types of networks are used i.e., Airtel, Jio and Vodafone. If no. of users of Vodafone are 30% of the total users, then find the no. of users of Vodafone.

76) गाँव T में, केवल तीन प्रकार के नेटवर्क का उपयोग किया जाता है अर्थात एयरटेल, जियो और वोडाफोन। यदि वोडाफोन के उपयोक्ताओं की संख्या कुल उपयोक्ताओं का 30% है, तो वोडाफोन के उपयोक्ताओं की संख्या ज्ञात कीजिए

- a) 400
- b) 500
- c) 600
- d) 450
- e) 550

Solution:

Total users of Airtel and Jio in village T = 750 + 650 = 1400

So, required no. of Vodafone users = $\frac{1400}{70} \times 30 = 600$

Problems on Ages

77) Five years ago the ratio of ages of Naveen to Manoj was 5: 4 and nine years hence the ratio becomes 7 : 6 respectively. Find the difference between their present ages?

77) पांच वर्ष पहले नवीन और मनोज की आयु का अनुपात 5:4 था तथा नौ वर्ष बाद अनुपात क्रमशः 7:6 हो जाता है। उनकी वर्तमान आयु के बीच का अंतर ज्ञात कीजिए?

- a) 7 years
7 वर्ष
- b) 15 years
15 वर्ष
- c) 4 years
4 वर्ष
- d) 12 years
12 वर्ष
- e) 18 years
18 वर्ष

Solution:

Let ages of Naveen and Manoj, 5 years ago was 5x and 4x respectively.

ATQ

$$\frac{5x+(5+9)}{4x+(5+9)} = \frac{7}{6}$$

$$x = 7$$

So, present ages of Naveen and Manoj is 40 years and 33 years respectively.

Required difference = 40 – 33 = 7 years

Partnership

78) Neeraj started a business with an investment of Rs. 7500. Prashant joined him after four months by investing Rs. 1000 more than Neeraj. If at the end of the year, the profit share of Neeraj is Rs. 900, then find the total profit?

78) नीरज 7500 रुपये के निवेश के साथ एक व्यवसाय शुरू करता है। चार महीने के बाद, प्रशांत नीरज से 1000 रुपये का निवेश करके उसके साथ व्यवसाय में शामिल होता है। यदि वर्ष के अंत में, नीरज का लाभ हिस्सा 900 रु., तो कुल लाभ ज्ञात कीजिए?

1. Rs. 1270
2. Rs. 1180
3. Rs. 1580
4. Rs. 1450
5. Rs. 1360

Solution:

Ratio of profit share of Neeraj to Prashant

$$= 7500 \times 12 : (7500 + 1000) \times 8$$
$$= 45 : 34$$

$$\text{So, required amount} = 900 \times \frac{(45+34)}{45} = 1580 \text{ Rs.}$$

Percentage

79) A shopkeeper marked up the price of an article by 60% and gives a discount of 20%. If he earns a profit of Rs. 112 on the article, then find the selling price of the article?

79

) एक दुकानदार किसी वस्तु का मूल्य 60% बढ़ा देता है और उसपर 20% की छूट देता है। यदि वह वस्तु पर 112 रुपये का लाभ अर्जित करता है। तो वस्तु का विक्रय मूल्य ज्ञात कीजिए।

- a) Rs. 300
- b) Rs. 512
- c) Rs. 640
- d) Rs. 448

e) Rs. 324

Solution:

Let the cost price of the article = Rs. $100x$.

Marked price of the article = $100x \times \frac{160}{100} = 160x$ Rs.

Selling price of the article = $160x \times \frac{80}{100} = 128x$ Rs.

Profit = $128x - 100x = 28x$

Given, $28x = 112$

So, selling price of the article = $\frac{112}{28} \times 128 = \text{Rs. } 512$

Time and Work

80) Sanjay can complete 80% of the work in 32 days and when he worked with Sunny, they take 18 days to complete 75% of the same work. Find the time taken by Sunny alone to complete the same work alone?

80) संजय किसी कार्य का 80% पूरा करने में 32 दिन का समय लेता है तथा जब वह समान कार्य सनी के साथ करता है, तो उन्हें कार्य का 75% पूरा करने में 18 दिन का समय लगता है। अकेले सनी द्वारा समान कार्य को पूरा करने में लिया गया समय ज्ञात कीजिए।

- a) 60 days
60 दिन
- b) 40 days
40 दिन
- c) 30 days
30 दिन
- d) 80 day
80 दिन
- e) 75 days
75 दिन

Solution:

Time taken by Sanjay to complete the whole work
 $= 32 \times \frac{100}{80} = 40 \text{ days}$

Time taken by Sanjay and Sunny together to
complete the whole work $= 18 \times \frac{100}{75}$
 $= 24 \text{ days}$

Let total work be 120 units (LCM of 40 & 24)

So, efficiency of Sanjay and (Sanjay + Sunny) is
3 and 5 units/day respectively.

Required time $= \frac{120}{5-3} = 60 \text{ days}$