Distance & direction

(1-2) Directions: Answer the questions based on the information givenbelow.

Eight persons are sitting at different places such that D is 6m north of A, who is 8m west of C. E is 12m east of B, who is 6m south of G. H is 4m south of C. F is 10m north of E. F is exactly between A and C.

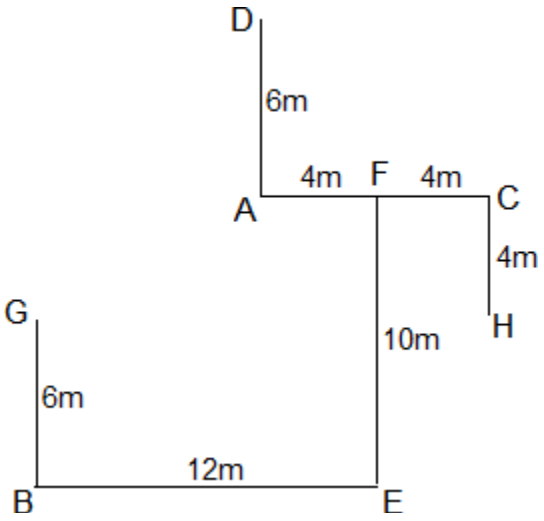
1. What is the direction of C with respect to G?A -
   South west

   B -
   North east

   C -
   North west

   D -
   East

   Solution



C is to the north east of G.

Hence, option b.

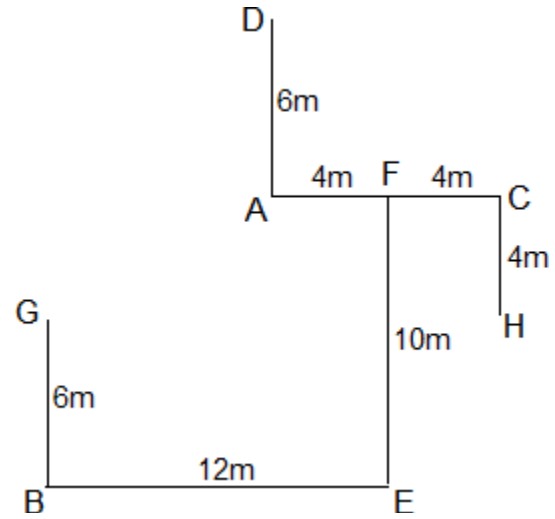
2. What is the shortest distance between G and H?A -
15m

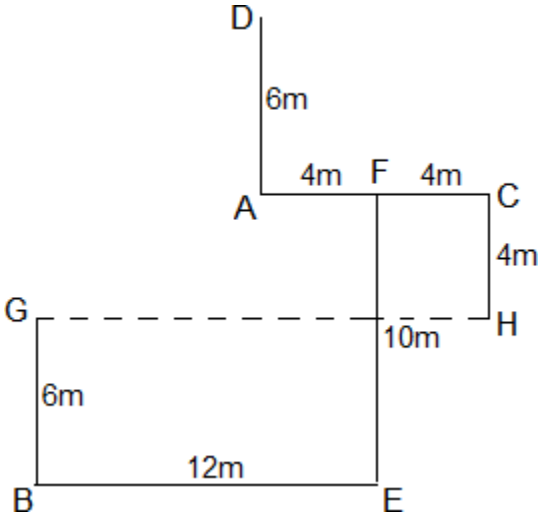
B -
16m

C -
18m

D -
20m

Solution





The shortest distance between G and H is (12 + 4) = 16m

Hence, option b.

Logical inequalities

3. In the question, assuming the given statements to be true, find which of the conclusion (s) among given three conclusions is /are definitely true and then give your answer accordingly.

Statements: V < Q ≤ D; A < V; R < D ≥ S

Conclusions:

I. S < V

II. A < D

III. R < Q

A -
Only conclusion II is true.

B -
Only conclusions I and II are true.

C -
Only conclusions II and III are true.

D -
Only conclusion I is true.

Solution

Given statements: V < Q ≤ D; A < V; R < D ≥ S

On combining, we get

A < V < Q ≤ D > R; S ≤ D ≥ Q > V

Conclusions:

I. S < V: False (AsS ≤ D ≥ Q > V, relation between S and V can't be determined)

II. A < D: True (As A < V < Q ≤ D, so A < D)

III. R < Q: False (As Q ≤ D > R, relation between R and Q can't be determined)

Hence, option a.

Blood relations

(4-5) Directions: Answer the questions based on the information givenbelow.

There are six members C, D, K, L, M and R in a family, which consists of three generations. There are two couples in the family.

R is the father of C, who is the father of M.C has no brother.K is the mother-in-law of D.

Neither D nor M is male.L is the sister of C.

4. How is L related to D?

A -

Aunt

B -
Sister

C -
Daughter

D -
Sister-in-law

Solution

Clues:

R is the father of C, who is the father of M.C has no brother. L is the sister of C.K is the mother-in-law of D.Neither D nor M is male member.

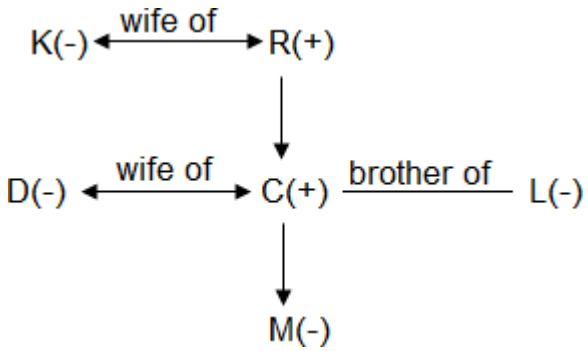
Inference:

K is the wife of R.

D is the wife of C.

L is the paternal aunt of M.

The family tree:



L is the sister-in-law of D.

Hence, option d.

5. How is M related to D’s husband?

A -

Daughter

B -
Sister

C -
Grand Daughter

D -
Niece

Solution

Clues:

R is the father of C, who is the father of M.C has no brother. L is the sister of C.K is the mother-in-law of D.Neither D nor M is male member.

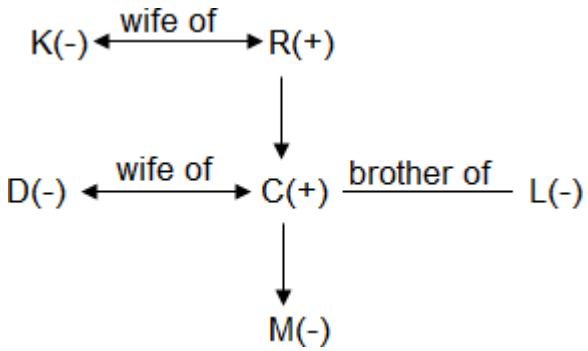
Inference:

K is the wife of R.

D is the wife of C.

L is the paternal aunt of M.

The family tree:



C is D's husband.

M is the daughter of C.

Hence, option a.

Logical inequalities

6. In the question, assuming the given statements to be true, find which of

the conclusion (s) among given three conclusions is /are definitely true and then give your answer accordingly.

Statements: T < M ≤ Q; D < R; S ≥ M; T < A < D

Conclusions:

I. R > T

II. S > A

III. D > M

A -
Only conclusion II is true.

B -
Only conclusions I and II are true.

C -
Only conclusions II and III are true.

D -
Only conclusion I is true.

Solution

Given statements: T < M ≤ Q; D < R; S ≥ M; T < A < D

On combining, we get

S ≥ M > T < A < D < R; Q ≥ M > T < A < D

Conclusions:

I. R > T: True (AsT < A < D < R, so R > T)

II. S > A: False (As S ≥ M > T < A, relation between S and A can't be determined)

III. D > M: False (AsM > T < A < D, relation between D and M can't be determined)

Hence, option d.

Alphabet test

7. How many pairs of letters are there in the word "LANGUETS" which has as many letters between them in the word as in the alphabet?

A -
Four
B -
Three

C -
Five

D -
More than Five

Solution

Given: LANGUETS

LN, LS, AE, NS, EG and ST are the six pairs which have as many letters between them in the word as in the alphabet.

Hence, option d.

Circular sitting arrangement

(8-13) Directions: Answer the questions based on the information givenbelow.

Eight students A, B, C, D, E, O, P and Q sit around a circular table equidistant from each other such that students, whose name starts with a vowel, face towards the centre while others face outside. Five of them have different ranks 1, 2, 3, 4 and 5 in a class test.

B sits 2nd to the left of D.Student, whose rank is 5, sits adjacent to B.C sits opposite to the one, whose rank is 5.O sits adjacent to C.Student, whose rank is 3, sits 2nd to the right of O.A sits immediate left of Q.P sits 2nd to the right of E but doesn't have any rank.B's rank is one more than the person, who sits to the immediate left of P.Neither C nor D has rank 4.

8. Who sits immediate right of the person, whose rank is 1?

A -
C

B -
Q

C -
B

D - D

Solution

Starting Point: First we shall try to place B and D, and then proceed by placing the student, whose rank is 5, so as to get only two cases.

Clues:

B sits 2nd to the left of D.

Student, whose rank is 5, sits adjacent to B.

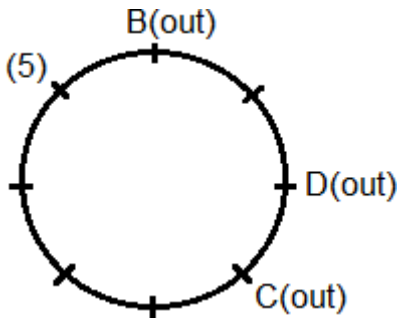
C sits opposite to the one, whose rank is 5.

Inference:

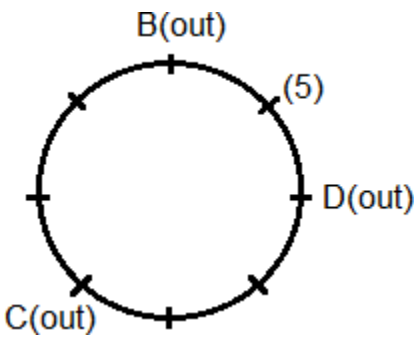
Student, whose rank is 5, sits either immediate left of B or immediate right of B.

C sits immediate right of D or 3rd to the right of D.

Case I: Student, whose rank is 5, sits immediate left of B:



Case II: Student, whose rank is 5, sits immediate right of B:



Clues:

O sits adjacent to C.
Student, whose rank is 3, sits 2nd to the right of O.

P sits 2nd to the right of E but doesn't have any rank.

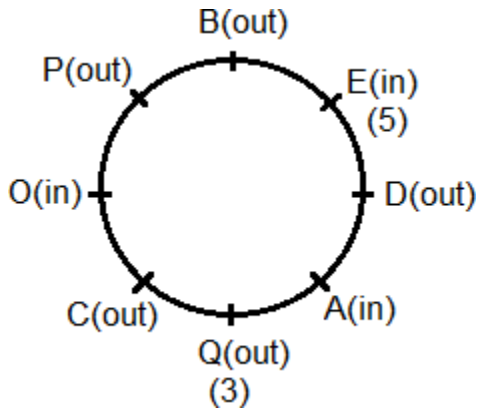
A sits immediate left of Q, this is not possible in case I, so case I is rejected.

Inference:

O sits immediate right of C.

Q's rank is 3 and E's rank is 5.

A sits immediate right of D.



Clues:

B's rank is one more than the person, who sits immediate left of P.

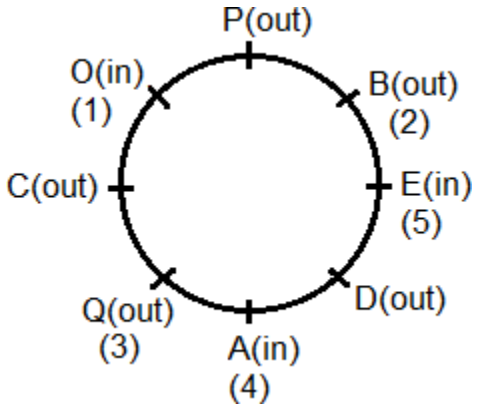
Neither C nor D has rank 4.

Inference:

B's rank is 2 and O's rank is 1.

A's rank is 4.

The final seating arrangement is given below:



C sits immediate right of O, whose rank is 1.

Hence, option a.

9. What is the position of the B with respect to the student, whose rank is 4?

A -
3rd to the left

B -
2nd to the left

C -
3rd to the right

D -
4th to the right

Solution

Starting Point: First we shall try to place B and D, and then proceed by placing the student, whose rank is 5, so as to get only two cases.

Clues:

B sits 2nd to the left of D.

Student, whose rank is 5, sits adjacent to B.

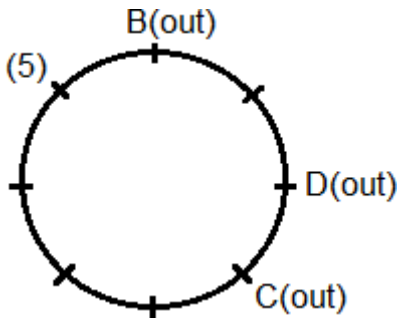
C sits opposite to the one, whose rank is 5.

Inference:

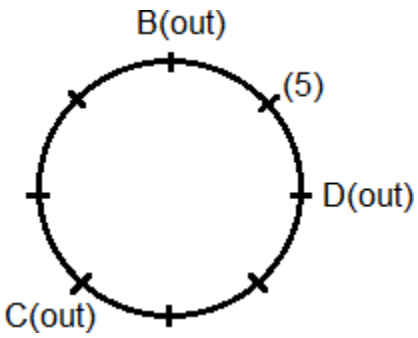
Student, whose rank is 5, sits either immediate left of B or immediate right of B.

C sits immediate right of D or 3rd to the right of D.

Case I: Student, whose rank is 5, sits immediate left of B:



Case II: Student, whose rank is 5, sits immediate right of B:



Clues:

O sits adjacent to C.

Student, whose rank is 3, sits 2nd to the right of O.

P sits 2nd to the right of E but doesn't have any rank.

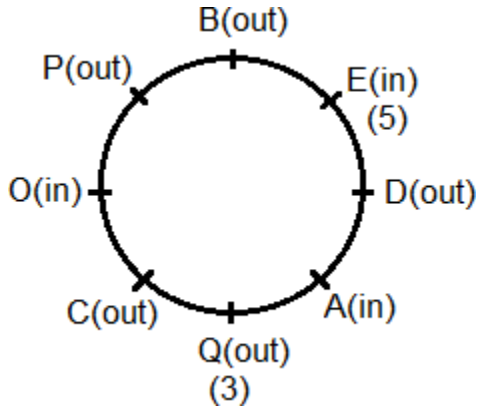
A sits immediate left of Q, this is not possible in case I, so case I is rejected.

Inference:

O sits immediate right of C.

Q's rank is 3 and E's rank is 5.

A sits immediate right of D.



Clues:

B's rank is one more than the person, who sits immediate left of P.

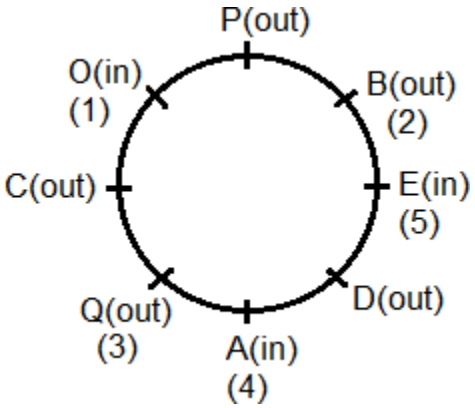
Neither C nor D has rank 4.

Inference:

B's rank is 2 and O's rank is 1.

A's rank is 4.

The final seating arrangement is given below:



B sits 3rd to the right of A, whose rank is 4.

Hence, option c.

10. Who sits opposite to the student, whose rank is 2?

A -
O

B -
Q

C -
A

D -
E

Solution

Starting Point: First we shall try to place B and D, and then proceed by placing the student, whose rank is 5, so as to get only two cases.

Clues:

B sits 2nd to the left of D.

Student, whose rank is 5, sits adjacent to B.

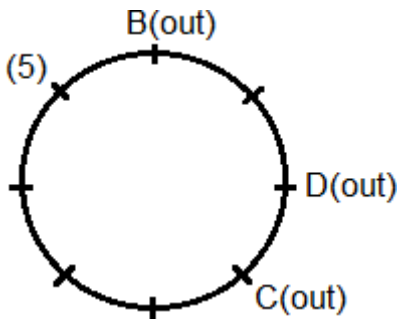
C sits opposite to the one, whose rank is 5.

Inference:

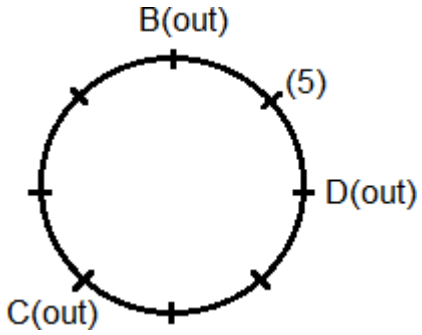
Student, whose rank is 5, sits either immediate left of B or immediate right of B.

C sits immediate right of D or 3rd to the right of D.

Case I: Student, whose rank is 5, sits immediate left of B:



Case II: Student, whose rank is 5, sits immediate right of B:



Clues:

O sits adjacent to C.

Student, whose rank is 3, sits 2nd to the right of O.

P sits 2nd to the right of E but doesn't have any rank.

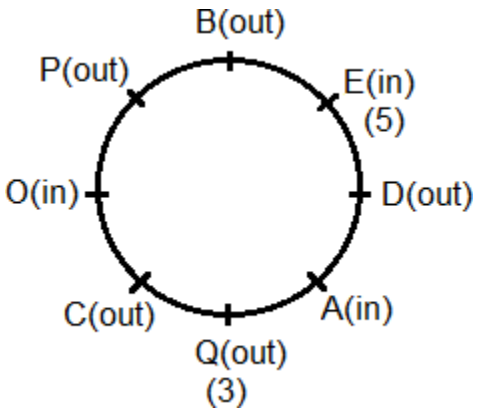
A sits immediate left of Q, this is not possible in case I, so case I is rejected.

Inference:

O sits immediate right of C.

Q's rank is 3 and E's rank is 5.

A sits immediate right of D.



Clues:

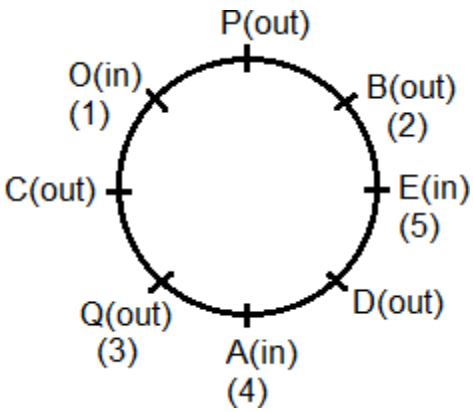
B's rank is one more than the person, who sits immediate left of P.

Neither C nor D has rank 4.

Inference:

B's rank is 2 and O's rank is 1.
A's rank is 4.

The final seating arrangement is given below:



Q sits opposite to B, whose rank is 2.

Hence, option b.

11. Find the odd one out.

A -
D

B -
E

C -
B

D -
O

Solution

Starting Point: First we shall try to place B and D, and then proceed by placing the student, whose rank is 5, so as to get only two cases.

Clues:

B sits 2nd to the left of D.

Student, whose rank is 5, sits adjacent to B.

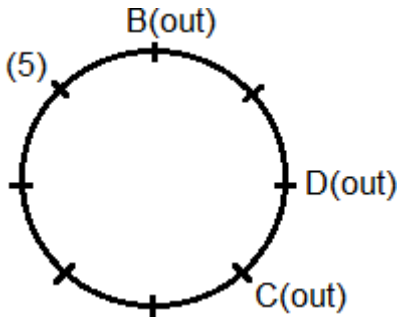
C sits opposite to the one, whose rank is 5.

Inference:

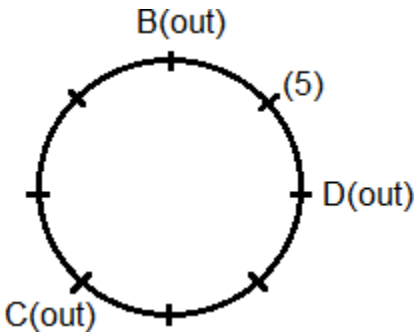
Student, whose rank is 5, sits either immediate left of B or immediate right of B.

C sits immediate right of D or 3rd to the right of D.

Case I: Student, whose rank is 5, sits immediate left of B:



Case II: Student, whose rank is 5, sits immediate right of B:



Clues:

O sits adjacent to C.

Student, whose rank is 3, sits 2nd to the right of O.

P sits 2nd to the right of E but doesn't have any rank.

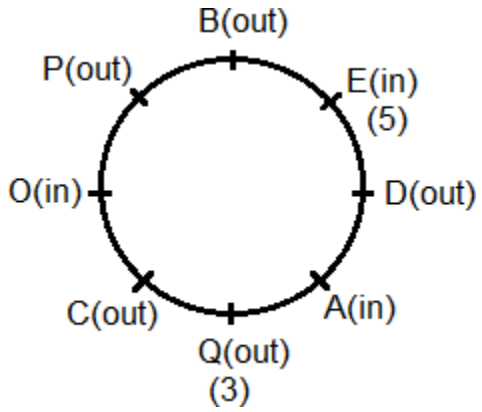
A sits immediate left of Q, this is not possible in case I, so case I is rejected.

Inference:

O sits immediate right of C.

Q's rank is 3 and E's rank is 5.

A sits immediate right of D.



Clues:

B's rank is one more than the person, who sits immediate left of P.

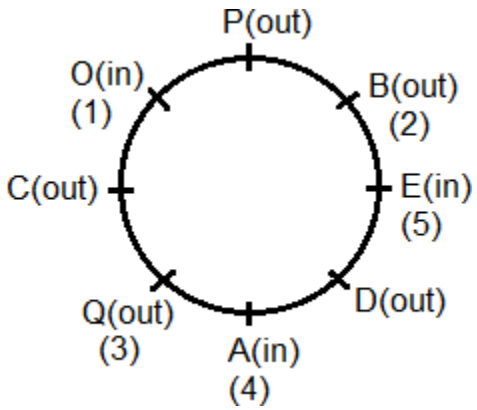
Neither C nor D has rank 4.

Inference:

B's rank is 2 and O's rank is 1.

A's rank is 4.

The final seating arrangement is given below:



All except D are rank holders.

Hence, option a.

12. Who sits 3rd to the right of E?

A -
C
B -
Q

C -
O

D -
P

Solution

Starting Point: First we shall try to place B and D, and then proceed by placing the student, whose rank is 5, so as to get only two cases.

Clues:

B sits 2nd to the left of D.

Student, whose rank is 5, sits adjacent to B.

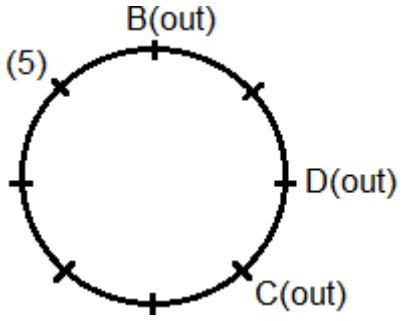
C sits opposite to the one, whose rank is 5.

Inference:

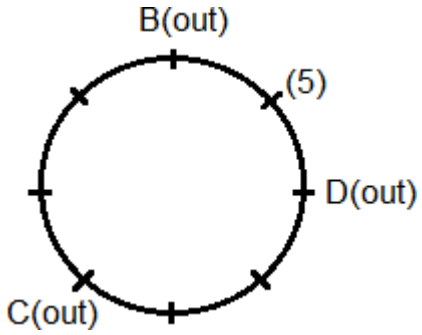
Student, whose rank is 5, sits either immediate left of B or immediate right of B.

C sits immediate right of D or 3rd to the right of D.

Case I: Student, whose rank is 5, sits immediate left of B:



Case II: Student, whose rank is 5, sits immediate right of B:



Clues:

O sits adjacent to C.

Student, whose rank is 3, sits 2nd to the right of O.

P sits 2nd to the right of E but doesn't have any rank.

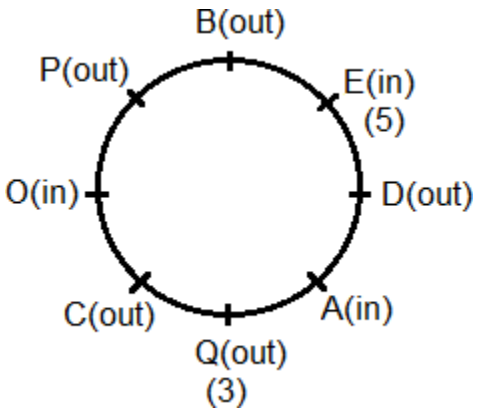
A sits immediate left of Q, this is not possible in case I, so case I is rejected.

Inference:

O sits immediate right of C.

Q's rank is 3 and E's rank is 5.

A sits immediate right of D.



Clues:

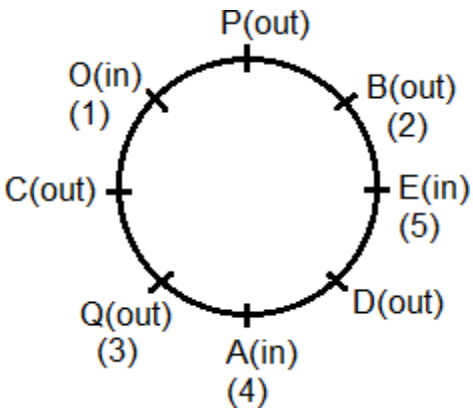
B's rank is one more than the person, who sits immediate left of P.

Neither C nor D has rank 4.

Inference:

B's rank is 2 and O's rank is 1.
A's rank is 4.

The final seating arrangement is given below:



O sits 3rd to the right of E.

Hence, option c.

Ordering & ranking

(14-15) Directions: Answer the questions based on the information given below.

Six persons A, C, D, K, M and R have different number of coins. More than two persons have more coins than M.D has lowest number of coins.Less than four persons have fewer coins than A.

R doesn't have 3rd highest number of coins. C has more coins than K, who has more coins than R.

14. Who has 3rd highest number of coins?

A -
A

B -
K

C -
M

D -
Can't be determined

Solution

Clues:

More than two persons have more coins than M. D has lowest number of coins. Less than four persons have fewer coins than A. C has more coins than K, who has more coins than R. R doesn't have 3rd highest number of coins.

Inference:

C has highest number of coins.

K has 2nd highest number of coins.

C > K > A > M/R > R/M > D

A has 3rd highest number of coins.

Hence, option a.

15. How many persons have more coins than M?

A -
Two

B -
Four

C -
Three

D -
Can't be determined

Solution

Clues:

More than two persons have more coins than M. D has lowest number of coins. Less than four persons have fewer coins than A. C has more coins than K, who has more coins than R. R doesn't have 3rd highest number of coins.

Inference:

C has highest number of coins.

K has 2nd highest number of coins.
C > K > A > M/R > R/M > D

Either three or four persons have more coins than M.

Hence, option d.

Logical inequalities

15. In the question, assuming the given statements to be true, find which of the conclusion (s) among given three conclusions is /are definitely true and then give your answer accordingly.

Statements: T > A ≥ R; S ≤ T; L ≤ V < A

Conclusions:

I. T > L

II. A < S

III. V < R

A -
Only conclusion II is true.

B -
Only conclusion I is true.

C -
Only conclusions I and II are true.

D -
Only conclusions II and III are true.

Solution

Given statements: T > A ≥ R; S ≤ T; L ≤ V < A

On combining, we get

S ≤ T > A > V ≥ L; R ≤ A > V; R ≤ A < T ≥ S

Conclusions:

I. T > L: True (As T > A > V ≥ L, so T > L)

II. A < S: False (As A < T ≥ S, relation between A and S can't be determined)

III. V < R: False (As R ≤ A > V, relation between V and R can't be determined)
Hence, option b.

Logical inequalities

16. In the question, assuming the given statements to be true, find which of the conclusion (s) among given three conclusions is /are definitely true and then give your answer accordingly.

Statements: B < L ≥ A; N < C ≤ A; T ≥ B < V

Conclusions:

I. V > A

II. L ≥ C

III. N < B

A -
Only conclusion II is true.

B -
Only conclusion I is true.

C -
Only conclusions I and II are true.

D -
Only conclusions II and III are true.

Solution

Given statements: B < L ≥ A; N < C ≤ A; T ≥ B < V

On combining, we get

T ≥ B < L ≥ A ≥ C > N; V > B < L ≥ A

Conclusions:

I. V > A: False (As V > B < L ≥ A, relation between V and A can't be determined)

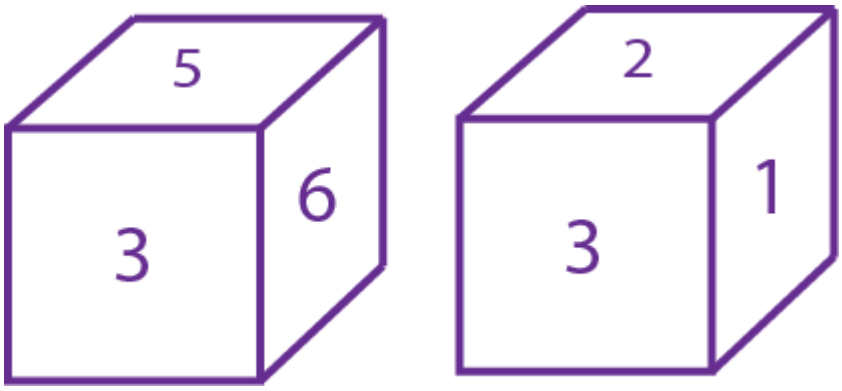
II. L ≥ C: True (As L ≥ A ≥ C, so L ≥ C)

III. N < B: False (As B < L ≥ A ≥ C > N, relation between N and B can't be determined)

Hence, option a.

Cubes & dices

17. Two positions of the same dice are given, which of the following number will be opposite to 1?



A - 4

B - 6

C - 5

D - 2

Solution

The number opposite to 1 would be '6'.

Hence, option b.

Alphabet & number series

18. Which of the following pair replaces ? in series given.C19D, ? , M13H, R10J, W7L

A - J15F

B -
H16F

C -
H17G

D -
H16E

Solution

Given series

C19D, ? , M13H, R10J, W7L

C + 5 = H, H + 5 = M, M + 5 = R, R + 5 = W

19 – 3 =16, 16 – 3 = 13, 13 – 3 = 10, 10 – 3 = 7

D + 2 = F, F + 2 = H, H + 2 = J, J + 2 = L

Hence, option b.

Circular sitting arrangement

(19-21) Directions: Answer the questions based on the information given below:

Seven persons N, P, Q, R, S, T and U sit around a circular table facing outside the centre.

One person sits between N and U. R sits to the immediate right of U. P doesn't sit 3rd to the right of T.

S doesn't sit 2nd to the left of R. S and P sit adjacent to each other. Q sits 3rd to the right of R.

19. Who sits to the immediate right of T?

A -
U

B -
N

C -
P

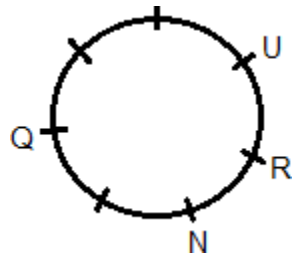
D -
Q

Solution

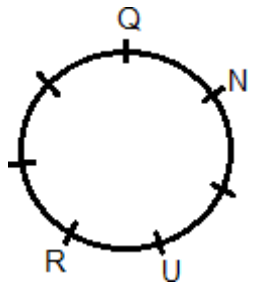
As One person sits between N and U.
R sits to the immediate right of U.

Q sits 3rd to the right of R, so either U sits 2nd to the left of N or U sits 2nd to the right of N.

Case I: U sits 2nd to the left of N:



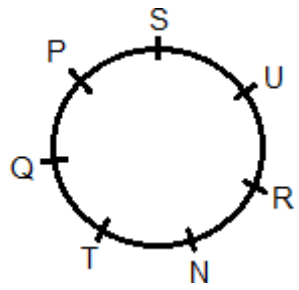
Case II: U sits 2nd to the right of N:



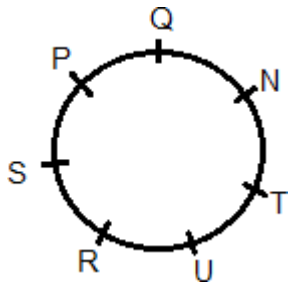
S and P sit adjacent to each other.

P doesn't sit 3rd to the right of T.

Case I:

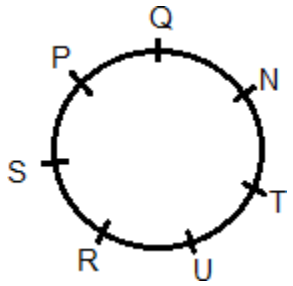


Case II:



S doesn't sit 2nd to the left of R, so case I is rejected.

The final circular seating arrangement is given below:



U sits to the immediate right of T.

Hence, option a.

20. How many persons sit between S and N from the right of S?A - Four

B - Two

C - Three

D - One

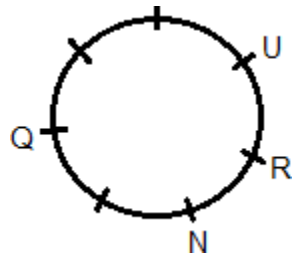
Solution

As One person sits between N and U.

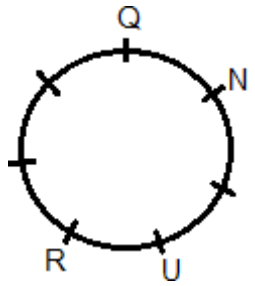
R sits to the immediate right of U.

Q sits 3rd to the right of R, so either U sits 2nd to the left of N or U sits 2nd to the right of N.

Case I: U sits 2nd to the left of N:



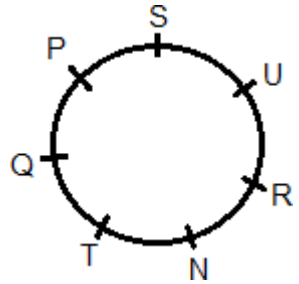
Case II: U sits 2nd to the right of N:



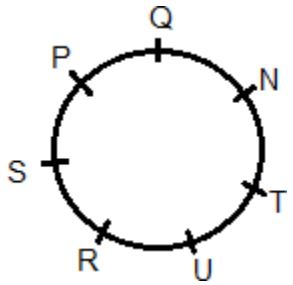
S and P sit adjacent to each other.

P doesn't sit 3rd to the right of T.

Case I:

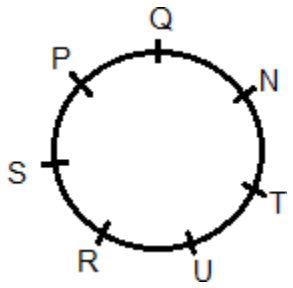


Case II:



S doesn't sit 2nd to the left of R, so case I is rejected.

The final circular seating arrangement is given below:

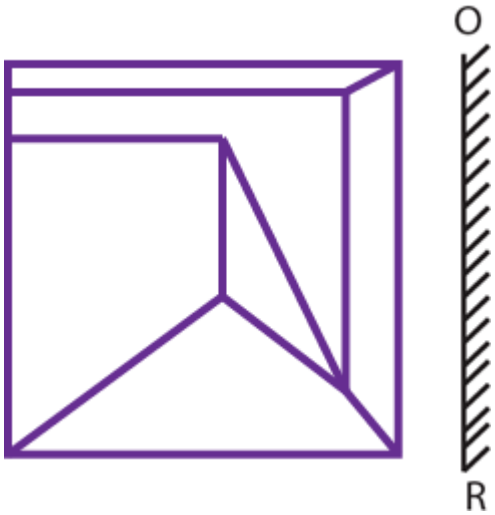


If counted in clockwise direction, two persons sit between S and N.

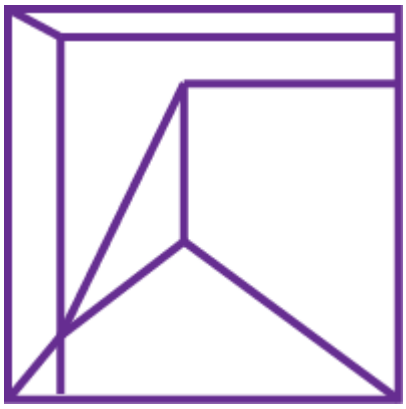
Hence, option b.

Mirror image

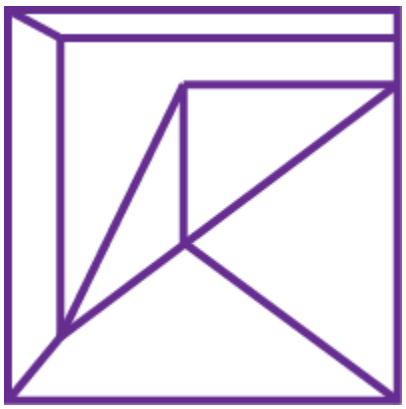
21. If a mirror is placed on the line OR, then which of the answer figures is theright image of the given figure?



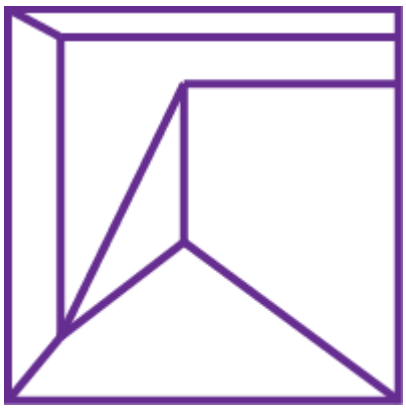
A -



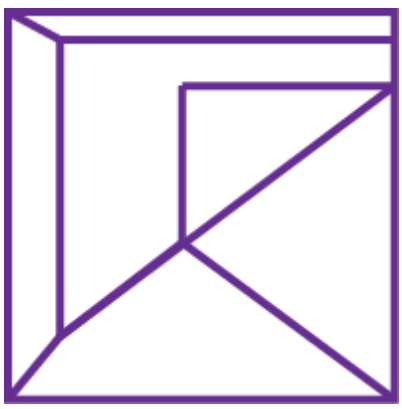
B -



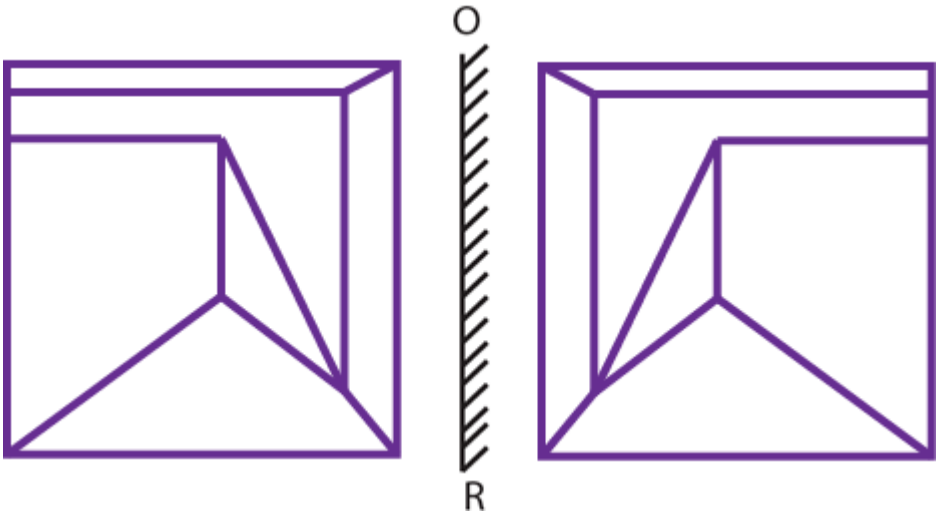
C -



D -



Solution



Hence, option c.

Matrix coding

22. In the question, a word is represented by only one set of number as given in any one of the alternatives. The sets of numbers given in the alternatives arerepresented by 2 classes of alphabets as in two matrices given below. The columns and rows of matrix I are numbers from 0-4 and that of matrix II are numbers from 5-9. A letter from this matrix can be represented 1st by its row and next by its column. Ex- 'A' can be represented by 20, 66 etc. and 'B' can berepresented by 10, 79, 97 etc. Similarly, you have to identify the set of word 'ASSEMBLY'.

Matrix I

	0	1	2	3	4
0	J	F	E	R	I
1	B	M	V	X	E
2	A	C	S	Z	Q

3	P	U	J	N	F
4	E	H	V	F	Y

Matrix II

	5	6	7	8	9
5	K	H	D	C	J
6	M	A	L	G	T
7	H	R	S	P	B
8	W	P	K	G	D
9	V	N	B	X	C

A -
20, 22, 77, 02, 65, 78, 67, 44

B -
20, 22, 77, 68, 65, 97, 67, 44

C -
20, 22, 77, 02, 65, 97, 67, 44

D -
20, 22, 77, 02, 65, 97, 58, 44

Solution

As the digits of the numbers represented by columns and rows respectively,

A	S	S	E	M	B	L	Y
20, 66	22, 77	22, 77	02, 14, 40	11, 65	10, 79, 97	67	44

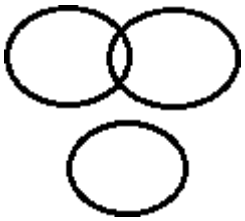
Hence, option c.

Logical venn diagram type-1

23. Select the Venn diagram that best illustrates the relationship between thefollowing classes:

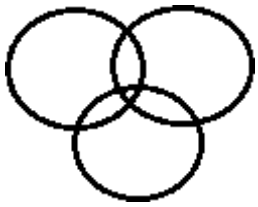
Men, Students, Literate

A -



B -

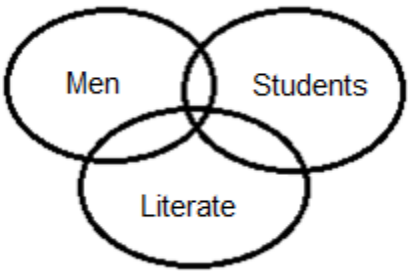
C -



D -

Solution

Following Venn diagram represents the relation between worker, graduate and educated



Hence, option c.

Syllogisms

24. Three statements are given followed by three conclusions numbered I, II, and III assuming the statements to be true, even if they seem to be at variancewith commonly known facts. Decide which of conclusion logically follow(s) from the statement.

Statements:

Some apples are mangoes.

All mangoes are bananas.

No oranges are mangoes.

Conclusions:

I. Some bananas being oranges is a possibility.

II. All apples are bananas.

III. A few apples are not oranges.

A -
Only conclusion I follows

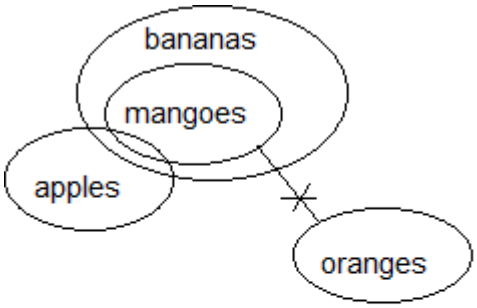
B -
Only conclusion II follows

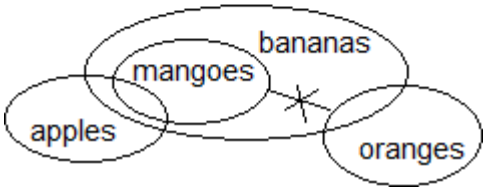
C -
Conclusion II and conclusion III follow

D -
Conclusion I and conclusion III follow

Solution

Following figure can be formed from the statements.





Conclusion I and conclusion III follow.

Hence, option d.

Blood relations

25. If father of S is K's father's mother's only son in law then how is mother of Srelated to K's paternal grandmother?

A -
Daughter

B -
Sister

C -
Daughter in law

D -
Sister in law

Solution

Mother of S is the daughter of K's paternal grandmother.

Hence, option a.

Inserting the missing number

26. Select the digit which can replace the ? from the given four alternatives.

5	1	4
4	6	2
3	2	6
18	11	?

A - 39

B - 32

C - 42

D - 26

Solution

Given

5	1	4
4	6	2
3	2	6
18	11	?

The pattern is $3^2 + 4 + 5 = 18$, $2^2 + 6 + 1 = 11$, similarly, $6^2 + 2 + 4 = 42$.

Hence, option c.

Odd man out

27. Three of the following four letter-clusters are alike in a certain way and oneis different. Pick the odd one out.

A -
JMHG

B -
LOJI

C -
QTON

D -
FHDC

Solution

2nd letter of each letter-cluster is the 3rd succeeding letter of the 1st letter.

3rd letter is the 5th preceding letter of the 2nd letter.

4th letter is the immediate preceding letter of the 3rd letter.

This is not followed in 'FHDC'.

Hence, option d.

Odd man out

28. Three of the following four word pairs are alike in a certain way and one isdifferent. Pick the odd one out.

A -
South Korea – Seoul

B -
Nepal - Kathmandu

C -
Canada - Ottawa

D -
Germany - Euro

Solution

Seoul is the capital of South Korea.

Kathmandu is the capital of Nepal.

Ottawa is the capital of Canada.

Euro is the currency of Germany.

Hence, option d.

Mathematical operations (interchange of signs & numbers)

29. If - denotes ÷, × denotes +, ÷ denotes × and + denotes -,4 - 7 ÷ 28 × 11 × 35 ÷ 5 - 7 + 17 = ?

A - 40

B - 46

C - 35

D - 38

Solution

If - denotes ÷, × denotes +, ÷ denotes × and + denotes -,

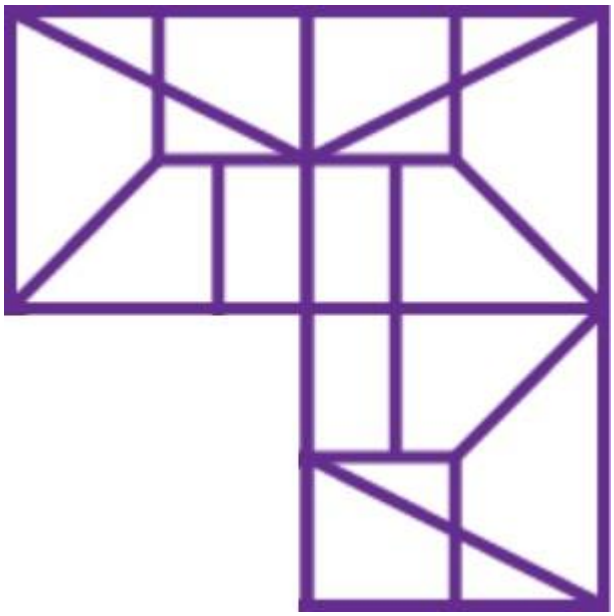
4 - 7 ÷ 28 × 11 × 35 ÷ 5 - 7 + 17 = ? means

4 ÷ 7 × 28 + 11 + 35 × 5 ÷ 7 – 17 = 35

Hence, option c.

Completion of incomplete pattern

30. Select the option in which will complete the following figure.



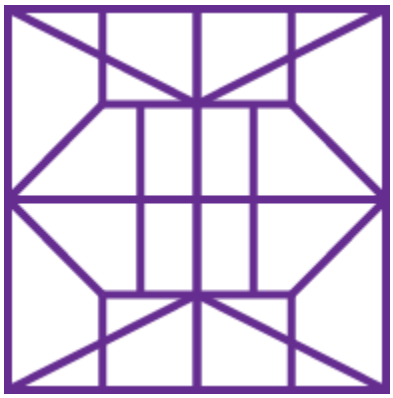
A -

B -

C -

D -

Solution



Hence, option c.