gradeup

Ranking & Comparison

Ordering, Ranking and sitting arrangement

In the comparison, questions are based on the comparison between two entities e.g. height based, weight-based, marks etc. We gather the information from the question and try to arrange the entities in increasing or decreasing order.

Ranking questions based upon the position or ranking of the given entity. We are required to find out the number of people in the row or the number of people sitting between two people.

Sitting arrangements are classified into three categories – Circular, linear, parallel rows. The final arrangement is made by the information given in the question.

Some of the important formula are –

- Total Number of persons = R1 + R2

R1 and R2 are ranks of a person (common person) from both (left and right) sides.

- When total number of students > (left position of one person + right position of another person)

Total number of persons = (Sum of positions of two different persons from both sides) + number of persons between two persons OR

Number of persons between two persons = Total number of persons - (Sum of positions of two different persons from both sides)

- When (left position of one person+ right position of another person) > Total number of students

Total number of persons = (R1+R2) - (number of persons between two persons+2) OR

Number of Persons between two different persons = (Sum of positions of two different persons from both sides) -Total no. of Persons –2

- To find the number of persons after or before a person whose rank is given -

Number of persons after or before the given person in a row = Total no. of persons – Position of the same person from another side

- When in a row, the positions of two persons is given and their positions are interchanged and after interchanging the position of 1st person is given from the same side as before interchanging.

New Position of the 2nd person from the same side as before interchanging = Position of 2nd person from the same side before interchanging + (Position of the 1st person after interchanging – position of the 1st person before interchanging from the same side

Total Number of persons = Sum of the positions of a person (same person) from both sides – 1

Number of persons between two persons = Difference in the positions of a person(same person) whose position from same side before and after interchanging is given - 1

Some common type of questions asked in the exam,

1. Ordering
2. Ranking
3. Sitting arrangement

a. Circular
b. Linear
c. Parallel rows

Below we are going to share the types of questions with examples to explain it,

Ordering

1. If Rahul has more money than Radha, Ravina and Babita. Kareena has more money than Radha and Babita but less than Ravina. Babita does not have the lowest amount money. Who has the lowest amount money among them?

a. Kareena
b. Ravina
c. Radha
d. Can't be determined

Ans. C

Solution –

Given that, Rahul has more money than Radha, Ravina and Babita it means

Rahul > (Radha, Ravina and Babita) _____(1)

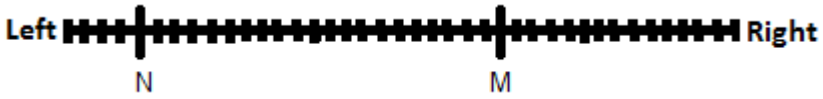
Kareena has more money than Radha and Babita but less than Ravina it means
Ravina > Kareena > (Radha and Babita) _____(2)
Babita does not have the lowest amount money it means
Ravina > Kareena > Babita > Radha _____(3)
On combining (1), (2) and (3),
Rahul > Ravina > Kareena > Babita > Radha
Hence, Radha has the lowest amount money among them.
So, the correct answer is option C.

2. Pritam got more marks than Krishna who got less marks than Anuj. Anuj got less marks than Pritam. Rishi got less marks than Krishna but more marks than Khusbu then who got second highest marks?
a. Pritam
b. Anuj
c. Krishna
d. Birju
Ans. B
Solution –
From first statement
Pritam>Krishna
From second statement
Pritam>Anuj
From third statement
Krishna>Rishi>Khusbu,
Khushbu< rishi< Krishna< Anuj< Pritam
From all statements together
Anuj is 2nd from top.

Ranking

1. X is 20th from the right and Y is 48th from the left in a row. If they interchange their positions, X becomes 30th from the right end. How many boys are there in the row?
a. 78
b. 81
c. 77
d. 82
Ans. C
Solution –
X = 20th position from right
Y = 48th Position from left
After interchange
X = 30th position from right
total number of boys = X from the right after interchange + Y from the left before interchange – 1
= 30 + 48 – 1
= 78 – 1
Total number of boys = 77
So, the correct answer is option C.

2. In a row of forty students, M is fifteenth from the right end and there are twenty students between M and N. N is the left of M. What is N's position from the left end of the row?
a. 6
b. 8
c. 5
d. 3
Ans. C
Solution –
From the information given in the question,



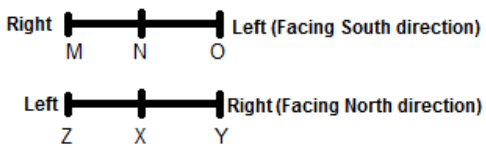
N's position from the right end = 15 + 20 + 1
= 36^{th}
Therefore N's position from the left end = 40 – 36 + 1
=40 – 35
= 5^{th}
Hence, the correct answer is option D.

3. In a row of girls, Pratibha is 15th from the left and Kanika is 23rd from the right. If they interchange their positions, then Pratibha becomes 18th from the left. Then at what position will Kanika be from the right?
a. 24
b. 25
c. 26
d. 20
Ans. C
Solution –

Total no of girls in a row = Left End + Right End - 1
= 18 + 23 – 1 = 40
Kanika's position from right end = Total girls – Left end + 1
= 40 – 15 + 1 = 26

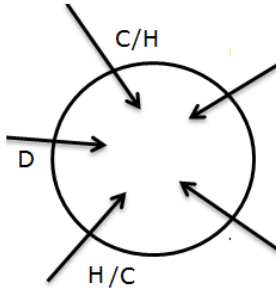
Sitting Arrangement

1. Six people are sitting in two parallel rows containing three people each, in such a way that there is an equal distance between adjacent persons. In row 1 M, N and O are seated and all of them are facing south. In row 2 X, Y and Z are seated and all of them are facing north. Therefore, in the given seating arrangement, each member seated in a row faces another member of the other row.
N faces X who sit in the middle of the row. Y sits immediate right of X. Z is not facing O. Who is opposite to O?
a. Z
b. Y
c. X
d. M
Ans. B
Solution –
N faces X who sit in the middle of the row.
_ N _
_ X _
Y sit immediate right of X.
_ N _
Z X Y
Z is not facing O
The final arrangement will be,

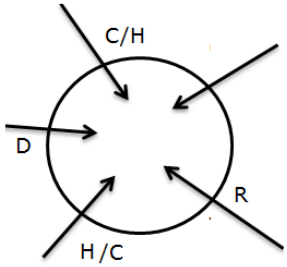


Y is opposite to O.
Hence, the correct answer is option B.

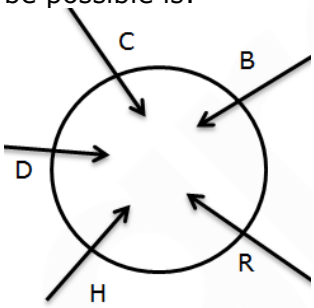
2. Five People B, D, R, C and H are sitting on a circular table facing centre.
1) D is sitting exactly between C and H
2) R is sitting second to the right of D
3) C and B are sitting adjacent to each other
Who sits second to the right of H?
a. B
b. C
c. R
d. D
Ans. A
Solution –
By (1), D is sitting exactly between C and H, the arrangement will be like:



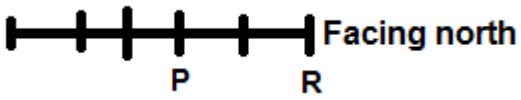
By (2), D is sitting exactly between C and H, the arrangement will be like:



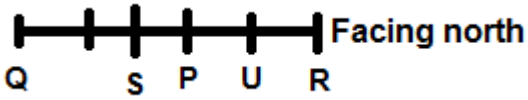
Now since, C and B are sitting adjacent to each other, only possible combination that would be possible is:



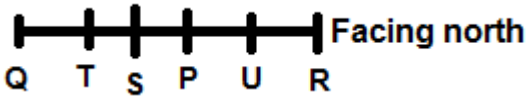
Hence, B is second to the right of H.
3. P, Q, R, S, T and U are sitting in a row of the class facing north.
i- P sits second to the left of R, who is at the extreme right end.
ii- Only two person sit between P and Q.
iii- Only one person sits between S and U, who is an immediate neighbour of R.
What is the position of P with respect to T?
a. Fourth to the right
b. Third to the right
c. Second to the left
d. Second to the right
Ans. D
Solution –
P sits second to the left of R, who is one of the extreme right ends.



Only two people sit between P and Q. Only one person sits between S and U, who is an immediate neighbour of R.



Final arrangement,



P is second to the right of T.
So, the correct answer is option D.