1. Ranking /Ordering

Ranking/Ordering refers to arranging given objects in the ascending order or descending order by studying the given data viz. Height, weight, marks, age, position etc.

(i)If in a row Amit's position is m^{th} from left end & n^{th} from right end then total no. of people in the row=m+n-1

Amit

I----------x----------I

→←

m n

(ii)In a row of 'm' people if Sumit's position is n^{th} from one end of the row, his position from other end of the row is (m-n+1)

I -------- -x------------------I

n → ← m-n+1→

m

As Sumit was also excluded when we did m-n we have to add + 1 to this. So it becomes m-n+1

(iii)In a row Abhishek and kundan are 'm^{th}' from left and 'n^{th}' from right end respectively having 'p' people in between them, then total number of people in the row is equal to

=m + n + p or

=m + n – (p + 2)

'p' persons

Case: I----------I xxxx....I----------I

Abhishek kundan

m + p+ n

n

kundan Abhishek

Case : I--------I xxxxxx I----------I

↓ m

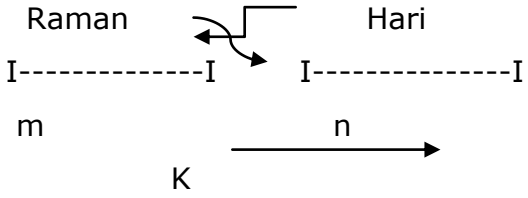
p persons

= m + n – (p + 2)

(iv)In a row Avinash is m^{th} from left end and if he shift towards right by 'b' positions and becomes n^{th} from right end then total people in the row is equal to …….= m + n + b

(v)In a row Raman and Hari are m^{th} from left end and n^{th} from right end respectively when they interchanged their positions Raman' s new position is k^{th} from left end then

total number of people in the row is equal to ……=$\underline{n + k - 1}$



ORDERING

When it comes to Ordering we use mathematical inequalities like > , < , = , ≥ and ≤ Symbols for the sake of convenience

1. A is smaller than B …. A < B ….A is neither greater than nor equal to B
2. A is greater than B …. A > B ….A is neither smaller than nor equal to B
3. A is equal to B …….. A =B ……A is neither greater than nor smaller than B
4. A is greater than or equal to B…. A ≥ B…..A is not smaller than B
5. A is smaller than or equal to B…..A ≤ B……A is not greater than B

- A is as tall as B means A = B….
  "only" is a keyword
- Kuri is shorter than only Suri, means Suri is the tallest person
- Nehra is taller than only Suraj means Suraj is shortest (except suraj there is no other person shorter than Nehra)

1. In a row of children, Neeta is fifteenth from the left end of the row. If she is shifted towards the right end of the row by four places, she becomes eighth from the right end. How many children are there in the row?

1)27 2)26 3)28 4)24 5)None of these

2. In a class of 40 children, Sunetra's rank is eighth form the top. Sujit is five ranks below Sunetra.What is Sujit's rank from the bottom?

1)27 2)29 3)28 4)26 5)None of these

3. Sam ranked ninth from the top and thirty-eighth from the bottom in a class. How many students are there in the class?

1)45 2)46 3)47 4)48 5)None of these

4. A class of boys stands in a single line. One boy is nineteenth in order from both the ends. How many boys are there in the class?

1)27 2)37 3)38 4)39 5)None of these

5. In a row of boys, Jeevan is seventh from the start and eleventh from the end. In

another row of boys, Vikas is tenth from the start and twelth from the end. How many boys are there in both the rows together?

1)36 2)37 3)39 4)Cannot be determined 5)None

6. In a class of 60, where girls are twice that of boys, Kamal ranked seventeenth from the top. If there are 9 girls ahead of kamal, how many boys are after him in rank?

1)3 2)7 3)12 4)23 5)None of these

7. In a row of boys, A is thirteenth from the left and D is seventeenth from the right. If in this row A is eleventh from the right then what is position of D from the left?

1)6^{th} 2)7^{th} 3)10^{th} 4)12^{th} 5)None of these

8. In a row of boys, A is fifteenth from the left and B is fourth from the right. There are three boys between A and B. C is just left of A. What is C's position from the right?

1)9^{th} 2)10^{th} 3)12^{th} 4)13^{th} 5)None of these

9. Rohit is seventeenth from the left end of a row of 29 boys and Karan is seventeenth from the right end in the same row. How many boys are there between them in the row?

1)3 2)5 3)6 4)Data inadequate 5)None

10. In a row of forty children, P is thirteenth from the left end and and Q is ninth from the right end. How many children are there between P and R if R is fourth to the left of Q?

1)12 2)13 3)14 4)15 5)None of these

11. In a class of 35 students, Kunal is placed seventh from the bottom whereas Sonali is placed ninth from the top. Pulkit is placed exactly in between the two. What is Kunal's position from Pulkit?

1)9 2)10 3)11 4)13 5)None of these

12. Richard is fifteenth from the front in a column of boys. There were thrice as many behind him as there were in front. How many boys are there between Richard and the seventh boy from the end of the column?

1)33 2)34 3)35 4)Data inadequate 5.None

13. Forty boys are standing in a row facing the North. Amit is eleventh from the left and Deepak is thirty-first from the right end of the row. How far will Shreya, who is third to the right of Amit in the row, be from Deepak?

1)2^{nd} 2)3^{rd} 3)4^{th} 4)5^{th} 5)None of these

14. In a class, among the passed students, Amisha is twenty-second from the top and sajal, who is 5 ranks below Amisha, is thirty-fourth from the bottom. All the students from the class have appeared for the exam. If the ratio of the students who passed in the exam to those who failed is 4:1 in that class, how many students are there in the class?

1)60 2)75 3)90 4)Data inadequate 5)None

15. In a queue, A is eighteenth from the front while B is sixteenth from the back. If C is twenty-fifth from the front and is exactly in the middle of A and B, then how many persons are there in the queue?

1)45 2)46 3)47 4)48 5)None of these

16.N ranks fifth in a class. S is eighth from the last. If T is sixth after N and just in the middle of N and S, Then how many students are there in the class?

1)23 2)24 3)25 4)26 5)None of these

17. In a row of girls, there are 16 girls between Priya and Natasha. Priya is thirty-Second from the left end of the row. If Priya is nearer than Natasha to the right end of the row, then how far away is Natasha from the left end of the row?

1)Data inadequate 2)14^{th} 3)15^{th} 4)16^{th} 5)None of these

18. In a queue, Shikhar is ninth from the back. Arun's place is eighth from the front. Nikhil is standing between the two. What could be the minimum number of boys standing in the queue?

1)8 2)10 3)12 4)14 5)None of these

19. In a row of girls facing North, Reena is 10^{th} to the left of Pallavi, who is 21^{st} from the right end. If Malini, who is 17^{th} from the left end, is fourth to the right of Reena, how many girls are there in the row?

1)37 2)43 3)44 4)Data in adequate 5)None

20. George is fifth from the left and Peter is twelfth from the right in a row of children. If Peter shifts by three places towards George, he becomes tenth from the left end. How many children are there in the row?

1)21 2)22 3)23 4)24 5)None of these

21.A, B, C, D and E are five students of different heights. A is taller than only C, B is shorter than only E. Who is the tallest person of this group?

1)A 2)B 3)E 4)Can't be determined 5)none

22.P, Q, R, S, T and V are 6 people of different weights where P is lighter than only R, T is heavier than S. Who is the lightest person?

1)S 2)P 3)Can't be determined 4)Q 5)none

Answers:

1.2; 15 + 4 + 8 -1 = 26.

2.3; Sunetra's rank = 8^{th}

Sujit's rank = 8 + 5 = 13^{th}

Sujit's rank from the bottom = (40 – 13 – 1) = 28^{th}

3.2;Clearly number students in the class = (8 + 1 + 37) = 46

4.2;Clearly number boys in the class = (18 + 1 + 18) = 37

5.5; Clearly, total number of boys in both the rows

= (Number of boys in Jeevan's row) + (Number of boys in Vikas row)

= (6 + 1 + 10) + (9 +1 +11) = (17 +21)=38

6.3; Let the number of boys be x. Then, number of girls = 2x.

x + 2x = 60 or 3x= 60 or x = 20.

So, number of boys = 20 and number of girls = 40.

Number of students behind Kamal in rank = (60 – 17) = 43.

Number of girls ahead of Kamal in rank = 9.

Number of girls behind Kamal in rank = (40 – 9) = 31.

Number of boys behind Kamal in rank = (43 – 31) = 12.

7.2; Clearly, A is 13^{th} from the left and 11^{th} from the right end of the row.

So, number of boys in the row = (12 + 1 + 10) = 23.

Now, D is 17^{th} from the right.

Number of boys to the left of D = (23 – 17) = 6.

Hence, D is 7^{th} from the left end of the row

8.1; Number of boys in the row = (15 + 4 + 3) = 22.

C is just left of A. So, C is 14^{th}, from the left end.

Number of boys to the right of C = (22 – 14) = 8.

So, C is 9^{th} from the right end of the row

9.1; Karan is 17^{th} from the right end.

Number of boys to the left of Karan = (29 - 17) = 12.

So, Karan is 13^{th} from left end. Also, Rohit is 17^{th} from the left end.

Clearly, there are 3 boys between Karan and Rohit.

10.3; Q is 9th from the right end and R is fourth to the left of Q. So, R is 13th from the right end.

Number of children to the left of R = (40 - 13) = 27.

Thus, R is 12th from the left end. Also, P is 13th from the left end.

Clearly, there are 14 persons between P and Q.

11.2; Number of students between Kunal and Sonali = 35 – (7 + 9) = 19.

Clearly, there are 9 students between Kunal and Pulkit, as well as Pulkit and Sonali

So, Kunal is 10th from Pulkit.

12.3; Number of boys in front of Richard = 14.

Number of boys behind Richard = (14× 3) = 42.

Total number of boys in the column = (14 + 1 + 42) = 57.

In a column of 57 boys, the seventh boy from the end is clearly 51st from the start.

Thus, we have to find the number of boys between the 15th and the 51st boy. Which is clearly 35

13.3; Number of boys to the left of Deepak = (40 - 31) = 9.

So, Deepak is 10th from the left end.

Clearly, Shreya is fourth to the right of Deepak.

14.2; Amisha is 22nd from the top and sajal is 5 ranks below Amisha. So Sajal is 27th from the top. Also, Sajal is 34th from the bottom.

Number of students passed = (26 + 1 + 33) = 60.

Let number of students passed and the number failed be 4x and x respectively

Then, 4x = 60 or x = 15.

Hence, number of students in the class = (60 + 15) = 75.

15.3; A is 18th from front C is 25th

Number of persons between A and C = 6.

Since C is exactly in middle of A and B, So number of persons between C and B = 6.

Number of persons in the queue = (17 + 1 + 6 + 1 + 6 + 1 + 15) = 47.

16.2; Number of students in the class = (4 + 1 + 5 + 1 + 5 + 1 + 7) = 24.

17.3; Clearly, Natasha is 15th from the left end of the row.

18.2; Hence, required number of students = 10.

19.2; Number of girls in the row = (26 + 1 + 16) = 43.

20.4; Number of Children in the row = (14 + 1 + 9) = 24.

21.3; B is shorter than only E indicates he is taller than all other people. So E is the tallest.