

TIME SEQUENCE, NUMBER &

RANKING TEST

1 Minute = 60 seconds

1 Hour = 60 minutes

1 Day = 24 hours

1 Week = 7 days

1 Month = 4 weeks

1 Year = 12 months

1 Ordinary year = 365 days

1 Leap year = 366 days

1 Century = 100 years

Other facts to be remembered

- A day is the period of the earth's revolution on its axis.
- A 'Solar year' is the time taken the earth to travel round the sun. It is equal to 365 days, 5 hours, 48 minutes and 47- seconds nearly.
- A 'Lunar month' is the time taken the moon to travel round the earth. It is equal to nearly 28 days.

Leap Year

- If the number of a given year is divisible by 4, it is a leap year. Hence, the years like 1996, 2008, 2012 are leap years. But years like 1997, 1991, 2005, 2007 are not divisible by 4 and therefore, such years are not leap years.
- In a leap year, February has 29 days.
- A leap year has 52 weeks and 2 days.

EXAMPLE 1. Neena returned house after 3 days earlier than the time she had told her mother. Neena's sister Veena reached five days later than the day Neena was supposed to return. If Neena returned on Thursday, on what day did Veena return?

- (a) Friday (b) Saturday
(c) Wednesday (d) Sunday

Sol. (a) Neena returned home on Thursday. Neena was supposed to return 3 days later, i.e., on Sunday.

Veena returned five days later from Sunday, i.e., on Friday. \therefore Option (a) is the correct option.

EXAMPLE 2. Vandana remembers that her father's birthday is between 13th and 16th of June. Whereas her brother remembers that their Father's birthday is between 14th and 18th of June. On which day is their Fathers birthday?

- (a) 14th June (b) 16th June
(c) 15th June (d) 18th June

Sol. (c) According to Vandana her father's birthday is on one of the days among 14th and 15th June. Vandana's brother, the father's birthday is one of the days among 15th 16th and 17th June.

It is obvious that the father's birthday is on the day to both the above groups. The common day is 15th. Hence, the father's birthday falls on 15th June. 1 Option (c) is the correct option.

NUMBER TEST

In such test, generally you are given a long series of numbers the candidate is required to find out how many times a number satisfying the conditions specified in the question occurs.

EXAMPLE3. How many 8s are there in the following number sequence which are immediately preceded by 5 but not immediately followed by 3?

38584583988588893

- | | |
|-------|-------|
| (a) 1 | (b) 4 |
| (c) 3 | (d) 2 |

Sol. (d) Let use see the following:

3 8 5 8 4 5 8 3 9 88 5 8 88 93

clearly, such sequence occurs two lines

∴Option (d) is correct.

EXAMPLE 4. What will be last digit of the 3rd number from top when the numbers given below are arranged in descending order after reversing the position of the digits within each number?

517 325 639 841 792

(a) 2 (b) 5

(c) 7 (d) 3

Sol. (d) The given numbers are:

517 325 639 841 792

After reversing, the numbers becomes as follows: 715

523 936 148 297

When arranged in descending order the numbers become as follows:

936 715 523 297 148;

Now, the third number from top is 523. Hence, the last digit of 523 is 3.

∴ Option (d) is correct.

RANKING TEST

In such problems, the ranks of a person both from the top from the bottom are given and on the basis of this the total number of persons is asked. Sometimes question is twisted also and position of a particular person is asked.

EXAMPLE 5. Karishma ranks 10th from the top and 15th from the bottom in an examination. Find the total number of students in Karishma's class.

(a) 35

(b) 31

(c) 28

(d) 30

Sol. (d) As per the question; the class has

(i) 15 students higher than Karishma

(ii) 14 students lower than Karishma

(iii) Karishma

∴ Total number of students = $15 + 14 + 1 = 30$ Hence, option (d) is correct.

1. How many such pairs of digits are there in the number 421579368 each of which has as many digits between them in the number as when they are arranged in ascending order?

☐ A) None

☐ B) One

☐ C) Two

☐ D) Three

Answer: D) Three

Explanation: Given Number: 4 2 1 5 7 9 3 6 8

Ascending order: 1 2 3 4 5 6 7 8 9

Hence the required pairs are 12, 49, 16

2. How many 4's are there preceded by 7 but not followed by 3?

5 9 3 2 1 7 4 2 6 9 7 4 6 1 3 2 8 7 4 1 3 8 3 2 5 6
7 4 3 9 5 8 2 0 1 8 7 4 6 3

☐ A) Four

☐ B) Three

☐ C) Six

☐ D) Five

Answer: A) Four

Explanation:

7 4 2

7 4 6

7 4 1

7 4 6

Only at these places 4 is preceded by 7 but not followed by 3

Q:

In a row of boys, If A who is 10th from the left and B who is 9th from the right interchange their positions, A becomes 15th from the left. How many boys are there in the row ?

☐ A) 23

☐ B) 31

☐ C) 27

☐ D) 28

Answer: A) 23

Explanation:

Clearly, A's new position is 15th from the left. But this is the same as B's earlier position which is 9th from the right.

Q:

Sam ranked 9th from the top and 38th from the bottom in a class. How many students are there in the class ?

☐ A) 45

☐ B) 47

☐ C) 46

☐ D) 48

Answer: C) 46

Explanation: Number of students in class = $(8 + 1 + 37) = 46$

Q:

Nitin ranks 18th in a class of 49 students. What is rank from the last ?

☐ A) 31

☐ B) 18

☐ C) 32

☐ D) 19

Answer: C) 32

Explanation: Number students behind the nitin in rank = $(49 - 18) = 31$. Nitin is 32nd from the last

Q: 3 How many such digits are there in the number 7346285 which are as far away from the beginning of the number, as they will be when arranged in ascending order within the number?

☐ A) None

☐ B) one

☐ C) Two

☐ D) Three

Answer: C) Two

Explanation:

Given Number : 7346285

Ascending Number : 2345678

Answer is Two. Those digits are 3,4

Q: 4 Three persons A, B and C are standing in a queue. There are five persons between A and B and eight persons between B and C. If there be three persons ahead of C and 21 persons behind A, what could be the minimum number of persons in the queue?

- ☐ A) 41
- ☐ B) 40
- ☐ C) 28
- ☐ D) 27

Answer: C) 28

Explanation:

Three persons A, B, C can be arranged in a queue in six different ways, ie ABC, CBA, BAC, CAB, BCA, ACB. But since there are only 3 persons ahead of C, so C should be in front of the queue. Thus, there are only two possible arrangements, ie CBA and CAB.

We may consider the two cases as under:

Case I: $\leftarrow 3C \leftrightarrow 8B \leftrightarrow 5A \rightarrow 21$

Clearly, number of persons in the queue = $(3+1+8+1+5+1+21=)$
40

Case II: $\leftarrow 3C \ A \leftrightarrow 5B \leftarrow 3C \ A \leftrightarrow 5B$

Number of persons between A and C

$$= (8 - 6) = 2$$

$$\therefore [C \leftrightarrow 8B \ A \rightarrow 21B] \therefore [C \leftrightarrow 8B \ A \rightarrow 21B]$$

Clearly number of persons in the queue = $(3+1+2+1+21) = 28$

Now, $28 < 40$. So, 28 is the minimum number of persons in the queue.

Q: 5 In a queue, Amrita is 10th from the front while Mukul is 25th from behind and Mamta is just in the middle of the two. If there be 50 persons in the queue. What position does Mamta occupy from the front ?

☐ A) 14th

☐ B) 16th

☐ C) 18th

☐ D) 20th

Answer: C) 18th

Explanation:

Number of persons between Amrita and Mukul = $50 - (10 + 25)$
= 15. Since Mamta lies in middle of these 15 persons, so
Mamta's position is 8th from Amrita i.e. 18th from the front.

Q: 6. A class of boys stands in a single line, One boy is 19th in order from both the ends, How many boys are there in the class ?

☐ A) 37

☐ B) 39

☐ C) 27

☐ D) 38

Answer: A) 37

Explanation: Number of boys in the class = $(18 + 1 + 18) = 37$

Q: 7 In a class of 180, where girls are twice the number of boys, Rupesh[a boy] ranked 34th from the top. If there are 18 girls ahead of Rupesh, how many boys are after him in rank?

☐ A) 45

☐ B) 44

☐ C) 60

☐ D) can't be determined

Answer: B) 44

Explanation: No. of boys up to the 34th rank = $34 - 18 = 16$

Total no of boys = $180 \times \frac{1}{2} + 1 = 60$

number of boys after the rank of Rupesh = $60 - 16 = 44$

Q:

In a row, Kumar is at 7th place from the left and Pawan is at 9th place from the right. When they interchange the positions Kumar becomes 11th from left. How many were seated in the row ?

☐ A) 19

☐ B) 20

☐ C) 21

☐ D) 27

Answer: A) 19

Explanation:

Initially from left 7th = kumar

from right 9th = pawan

Interchange kumar = 11th from left, from right kumar = 9th;

$11 + 8 = 19$;

8 is

1,2,3,4,5,6,7(pawan),8,9,10,11(kumar),12,13,14,15,16,17,18,19;

simply count the 9th place from right we will get total as 19.

Q: If the third day of a month is Tuesday, which of the following would be the 4th day before the 27th day of that month?

☐ A) Tuesday

☐ B) Monday

☐ C) Wednesday

☐ D) Sunday

Answer: B) Monday

Explanation: Dates on which Tuesday fall are 3,10,17, and 24

Hence, the 27th day of the month will be (Tuesday + 3 days=)Friday

Required day of the month = Friday - 4 = Monday

Q: If the 30th january 2003 was thursday, what was the day day on 2nd march, 2003?

☐ A) sunday

☐ B) thursday

☐ C) tuesday

☐ D) saturday

Answer: A) sunday

Explanation:

30th january, 2003 was thursday.

So, 6th, 13th, 20th, 27th february were all thursdays.

thus 2nd march, 2003 was 3 days after thursday, i.e. , sunday

Q: P, Q, R, S, T, U, V and W are sitting round the circle and are facing the centre:

P is second to the right of T who is the neighbour of R and V.

S is not the neighbour of P.

V is the neighbour of U.

Q is not between S and W. W is not between U and S.

Then Who is sitting opposite to U ?

☐ A) Q

☐ B) P

☐ C) R

☐ D) W

Answer: B) P

Explanation: From the given information, the sitting arrangement can be

P-Q-W-S-U-V-T-R i.e. in circular as



From the above figure it is clear that opposite to U is P.

Q: How many combinations of two-digit numbers having 8 can be made from the following numbers?

8, 5, 2, 1, 7, 6

☐ A) 10

☐ B) 6

☐ C) 9

☐ D) 11

Answer: D) 11

Explanation: The possible two-digit numbers are: 88, 85, 82, 81, 87, 86, 58, 28, 18, 78, 68

These are 11 in number

Q: How many even numbers are there in the following sequence of numbers which are immediately followed by an odd number as well as immediately preceded by an even number?

8 5 8 6 7 6 8 9 3 2 7 5 3 4 2 2 3 5 5 2 2 8 1 1 9 3 1 7 5 1

☐ A) 2

☐ B) 3

☐ C) 4

☐ D) 5

Answer: C) 4

Explanation:

We have to find out even number - even number - odd number sequence.

8 5 8 6 7 6 8 9 3 2 7 5 3 4 2 2 3 5 5 2 2 8 1 1 9 3 1 7 5 1

There are four such even numbers: 6, 8, 2 and 8.