Series

In Number Series reasoning, Series is a sequential order of letters, numbers, or both arranged in such a way that each term in the series is obtained according to some specific rules. These rules can be based on mathematical operations, place of letters in alphabetical order, and so on.

In questions related to the number series logical reasoning section, a specified sequence or order of letters, numbers or a combination of both will be given in which one of terms such as letter/number/letter and number of the series will be missing either at the end of the series or in between the series. Candidates need to identify the pattern involved in the formation of series and accordingly find the missing term to complete the series.

What is a Number Series Reasoning?

Number Series refers to a sequence of numbers following some pattern. Candidates need to find the missing or wrong number in the provided series. There may be some questions where one of the terms in the given series will be incorrect, and candidates need to find out that term of the series by identifying the pattern involved in the formation of the series.

There is no set pattern and each question may follow a different type of pattern or sequential arrangement of letters or digits, which candidates need to detect using their common sense and reasoning ability. On the basis of various types of questions that are asked in various competitive examinations, we have classified the number series reasoning section into several types, which are given below.

Types of Number Series

Let us see the various types of questions that may come one by one from below.

1. Addition Series

In this type of number series reasoning, specific numbers based on some pattern are added to get the next number.

2. Subtraction Series

In this type of number series reasoning, specific numbers based on some pattern are subtracted to get the next number.

3. Multiplication Series

In this type of number series reasoning, a particular type of number pattern is multiplied to get the next number.

4. Division Series

In this type of number series reasoning, a particular type of number pattern is divided to get the next number.

5. Square Series

In this type of number series reasoning, each number is a perfect square of a particular number pattern.

6. Cube Series

In this type of number series reasoning, each number is a perfect cube of a particular number pattern.

7. Fibonacci Series

In this type of number series reasoning, the next number is the addition of two previous numbers.

8. Alternating Series

In this type of number series reasoning, multiple number patterns are used alternatively to form a series.

9. Mixed Operator Series

In this type of number series reasoning, multiple operators are applied to get the next number in the series.

10. Arranging Number

In this type of number series reasoning, candidates need to rearrange numbers, as specified, and then answer the given questions.

How to Solve Question Based on Number Series – Know all Tips and Tricks

Candidates can find various tips and tricks from below for solving the questions related to the Number Series reasoning section.

Tip # 1: Candidates need to find the process involved in the given series such as addition, subtraction, multiplication, division, and so on to find out the correct answer.

Tip # 2: For arranging type number series, candidates need to rearrange the given series by using various processes to find out the correct answer.

Number Series Sample Questions

Question 1: 3, 6, 11, 18, 27, ?, 51 (based on addition series)

Solution: The solution of the series is as follows.

3 + **3** = 6

6 + **5** = 11

11 + **7** = 18

18 + **9** = 27

27 +**11** = 38

38 + **13** = 51

Hence, the correct answer is 38.

Question 2: 50, 45, 40, 35, 30, ? (based on subtraction series)

Solution: The solution of the series is as follows.

50 – **5** = 45

45 – **5** = 40

40 – **5** = 35

35 – **5** = 30

30 – **5** 25

Hence, the correct answer is 25.

Question 3: 5, 11, 24.2, 53.24, ?, 257.6816 (based on multiplication series)

Solution: The solution of the series is as follows.

5 × 2.2 = 11

11 × 2.2 = 24.2

24.2 × 2.2 = 53.24

53.24 × 2.2 = 117.128

117.128 × 2.2 = 257.6816

Hence, the correct answer is 117.128.

Question 4: 4096, 1024, 256, ?, 16, 4 (based on division series)

Solution: The solution of the series is as follows.

4096 / **4** = 1024

1024 / **4** = 256

256 / **4** = 64

64 / **4** = 16

16 / **4** = 4

Hence, the correct answer is 64.

Question 5: 49, 121, 169, ?, 361 (based on square series)

Solution: The solution of the series is as follows.

$7^2 = 49$

$11^2 = 121$

$13^2 = 169$

$17^2 = 289$

$19^2 = 361$

Hence, the correct answer is 289.

Question 6: 8, 64, 216, ?, 1000 (based on cube series)

Solution: The solution of the series is as follows.

$2^3 = 8$

$4^3 = 64$

$6^3 = 216$

$8^3 = 512$

$10^3 = 1000$

Hence, the correct answer is 512.

Question 7: 12, 13, 25, 38, ?, 101, 164 (based on fibonacci series)

Solution: The solution of the series is as follows.

12

13

25 = 12 + 13

38 = 13 + 25

63 = 25 + 38

101 = 38 + 63

164 = 101 + 63

Hence, the correct answer is 63.

Question 8: 2, 29, 4, 25, 6, ?, 8, 17 (based on alternating series)

Solution: The solution of the series is as follows.

$2 + 2 = 4$

$4 + 2 = 6$

$6 + 2 = 8$

Similarly,

$29 - 4 = 25$

$25 - 4 = 21$

$21 - 4 = 17$

Hence, the correct answer is 21.

Question 9: 5, 7, 21, 55, ?, 215 (based on mixed operator series)

Solution: The solution of the series is as follows.

$5 + (2^2 - 2) = 7$

$7 + (4^2 - 2) = 21$

$21 + (6^2 - 2) = 55$

$55 + (8^2 - 2) = 117$

$117 + (10^2 - 2) = 215$

Hence, the correct answer is 117.

Question 10: The position of how many digit(s) in the number 381576 will remain the same after the number is arranged in the ascending order?

Solution:

Original number form is: 3 8 1 5 7 6

Ascending order form is: 1 3 5 6 7 8

If we check the number/s whose position will remain the same in both forms then we will see that the position of only number remains same or unchanged which is the number 7.