



Learn the tricks to solve the Missing Number Series Questions

Mastering the art of solving **Missing Number Series** Questions is crucial for excelling in **banking exams**. These questions, often a part of quantitative aptitude sections, test your logical reasoning and pattern recognition abilities. Understanding the underlying patterns and employing effective tricks can significantly enhance your speed and accuracy. In this comprehensive guide, we delve into the strategies that will unravel the complexity of missing number series, empowering you to approach them with confidence.

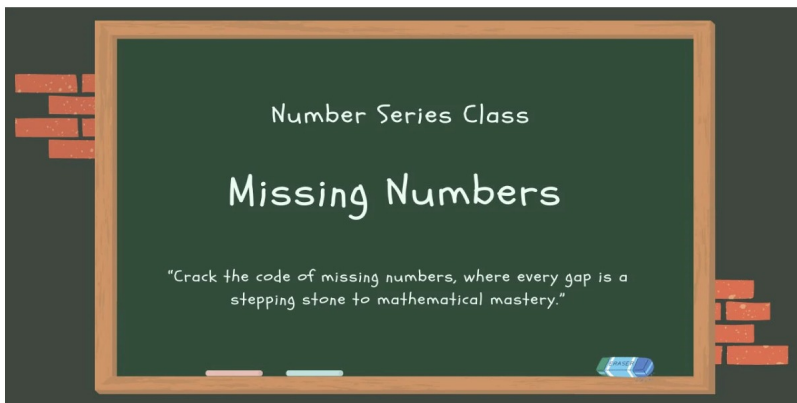
From identifying arithmetic progressions to decoding intricate patterns, this tutorial will equip you with the essential tools to conquer the challenges posed by missing number series questions, ensuring you shine in your banking exams. Elevate your problem-solving skills and ace the quantitative section with this indispensable resource.

## Missing Number Series

Missing Number Series questions are a common type of aptitude question found in bank exams. These questions test your ability to identify patterns and sequences in numbers. To solve these questions, you need to be able to quickly identify the pattern in the series and then use that pattern to determine the missing number.

There are many different types of Missing Number Series questions, but some of the most common include:

- **Arithmetic Series:** In an arithmetic series, each number is equal to the previous number plus a constant difference. For example, the series 2, 5, 8, 11 is an arithmetic series with a common difference of 3.
- **Geometric Series:** In a geometric series, each number is equal to the previous number times a constant ratio. For example, the series 2, 4, 8, 16 is a geometric series with a common ratio of 2.
- **Mixed Series:** Mixed series are a combination of arithmetic and geometric series. For example, the series 2, 4, 6, 8 is a mixed series that consists of an arithmetic series (2, 4, 6) followed by a geometric series (6, 8).



To solve Missing Number Series questions, you need to be able to quickly identify the pattern in the series and then use that pattern to determine the missing number. Once you have identified the pattern, you can usually use a simple formula to calculate the missing number.



## Tips to Solve Missing Number Series Questions

To solve number series you have to consider the following points:

1. Learn the squares and cubes of all natural numbers from 1 to 30.
2. Check for the sequence by analyzing the series by checking the difference, by dividing, by checking multiples between the consecutive terms.
3. If in a sequence, numbers are increasing very fast like we got first number 45 and then second 678 then you'll check multiplication first in this series and if opposite observed, then we will go with divide.
4. If the numbers of series are close like, 90, 86, 82, 78, ?, then we will go with a difference. We will have 3 cases of difference (single difference, double difference, and triple difference).
5. Now, the most important point of the number series, if you got a series which has 0.25 or 0.5 in it, like, 5.5, 6.5, 7.5..... then we will multiply this series by  $\frac{1}{2}$  after finding the difference in it.

We will start with an easy level of number series completion.

## Types of Questions asked from Missing Number Series

E.g. What will be in the place of the question mark in the following question? [SBI Clerk Prelims 2022]

5, 30, 155, 780, ?

**Sol:** Firstly we have to identify the pattern in this series and after keen observation, you will get this pattern

$$\Rightarrow 5 \times 5 + 5 = 30$$

$$\Rightarrow 30 \times 5 + 5 = 155$$

$$\Rightarrow 155 \times 5 + 5 = 780$$

$$\Rightarrow 780 \times 5 + 5 = 3905 \text{ (Ans.)}$$

E.g. What will be in the place of the question mark in the following question?

13, 15, 21, 33, 53, ?

**Sol:** As the numbers of this series are close to each other so we will find out the difference of it.



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$$\begin{array}{cccccc} 13 & 15 & 21 & 33 & 53 & ? \\ +2 & +6 & +12 & +20 & * & \\ & +4 & +6 & +8 & ** & \\ & +2 & +2 & & & \end{array}$$

\*(difference between numbers, but we didn't get any pattern yet so we'll go again with the difference of 2, 6, 12, 20)

\*\* (now we can get a pattern of difference two in this series)

Now after identifying the pattern we will go reverse like this,  $8 + 2 = 10$ , then  $10 + 20 = 30$ , and lastly add 30 and 53. So the correct answer would be  $30 + 53 = 83$ . (Ans.)

**Note:** As we know each one mark is very important so kindly don't make any silly mistakes, in addition, many of us do silly mistakes and loose marks in such easy questions.

**E.g.** What will be in the place of the question mark in the following question? [SBI PO Mains 2021]

61, 82, 124, 187, ?, 376

**Sol:** Firstly we have to identify the pattern in this series and after keen observation, we will get the pattern of table 21. We can find out the difference in numbers which will also help us to get this same pattern.

$$\Rightarrow 61 + 21 = 82$$

$$\Rightarrow 82 + 21 \times 2 = 124$$

$$\Rightarrow 124 + 21 \times 3 = 187$$

$$\Rightarrow 187 + 21 \times 4 = 271 \text{ (Ans.)}$$

**E.g.** What will be in the place of the question mark in the following question?

23, 46, ?, 690, 4830, 53130

**Sol:** The series follows the following pattern:

Prime numbers starting with 2 are multiplied

$$\Rightarrow 23 \times 2 = 46$$



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$$\Rightarrow 46 \times 3 = 138$$

$$\Rightarrow 138 \times 5 = 690$$

$$\Rightarrow 690 \times 7 = 4830$$

$$\Rightarrow 4830 \times 11 = 53130$$

$$\therefore ? = 138 \text{ (Ans.)}$$

**E.g.** What will be in the place of the question mark in the following question? [IBPS Clerk Prelims 2022]

5.5, 9, 11, 13.5, 16.5, ?, 22, 22.5

**Sol:** Here we have two alternate series:

$$\Rightarrow 5.5 + 5.5 = 11$$

$$\Rightarrow 11 + 5.5 = 16.5$$

$$\Rightarrow 16.5 + 5.5 = 22$$

And

$$\Rightarrow 9 + 4.5 = 13.5$$

$$\Rightarrow 13.5 + 4.5 = 18$$

$$\Rightarrow 18 + 4.5 = 22.5$$

$$\therefore ? = 18 \text{ (Ans.)}$$

In conclusion, mastering the tricks to solve Missing Number Series Questions is not just about preparing for an exam; it's about honing your logical thinking and pattern recognition skills for real-world problem-solving. This knowledge is a valuable asset that extends beyond the confines of an examination hall, enriching your analytical capabilities in various aspects of life. As you navigate the intricacies of number series, remember that each solution unveils a unique pattern, offering a glimpse into the beauty of mathematical relationships.

Keep practicing, stay curious, and approach each question with the confidence gained from understanding the underlying structures. May your journey in conquering Missing Number Series Questions be both fulfilling and empowering, propelling you towards success in your banking exams and beyond.

So, this is all for today. In our next blog, we will discuss **Wrong Number Series** for **Banking Exams**. Till then, Stay tuned!