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NUMBER SERIES

What is Number Series

Number series is an order of numbers which are not arranged randomly but follow a pattern. Here in these notes, we will understand how to identify which kind of pattern is following because without this it is next to impossible to have a command on number series. Number series is a form of numbers in a certain sequence, where some numbers are mistakenly put into the series of numbers and some number is missing in that series, we need to observe first and then find the accurate number to that series of numbers.

Scope in exams

Almost in every pre and mains exam of State bank of India number series questions are asked in bunches of 5 questions and as we know now a days pre-exam are conducted with time restrictions importance of number series becomes very high and they could be solved in very little time

Different types of Number Series

There are some formats of series which are very frequently asked in Exams.

Difference series: In this type of series pattern can be found by using difference of terms. If any pattern is found after the first difference like square, cube or multiplication then this is called one tier series otherwise we need to proceed further and then it is called two tier series.

3 → 6 → 9 → 12 → 15 → 18

+3 +3 +3 +3 +3

20 → 28 → 37 → 47 → 58 → 70

8 9 10 11 12

Fibonacci Series: In this kind of series the next term is found by adding the previous number.

1 1 2 3 5 8 13 21

Prime Number series: In this kind of series the next term is found by adding, multiplying or dividing by prime numbers.

2 4 12 60 420 4620

Perfect Square Series: These Types of Series are based on the square of a number which is in the same order and one square number is missing in that given series.

480 525 572 621 672 725

22^2-4 23^2-4 24^2-4 25^2-4 26^2-4 27^2-4

Perfect Cube Series: This Types of Series are based on a cube of a number which is in the same order and one cube number is missing in that given series.

2197 3375 4913 6859 9261

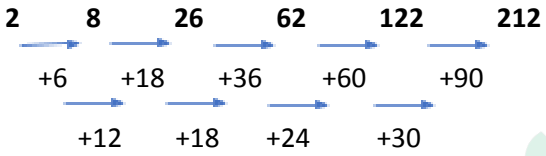
13^3 15^3 17^3 19^3 21^3

Ration Series: This type of series is based on ration series, where sequence is in form of ratio in difference between the numbers. All numbers are arranged in ratio sequence order.

4096 5120 6400 8000 10000

Here the ratio between each consecutive term is 4:5 or we can say the next term can be found by multiplying 5/4 to the previous term.

Mixed Series: This series is most important and asked in exams more frequently than any other pattern. Mixed Number series is an arrangement of numbers in a certain order. As you know that the given series is a mixed series, notice that this type of series is more than one different order which is arranged alternatively in a single series or created according to any non-conventional rule.



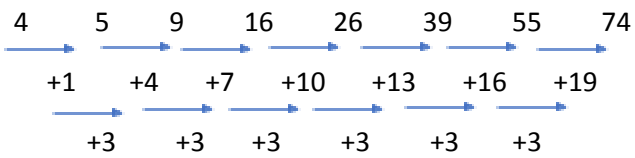
In mixed Series a mixed number is a combination of numbers in another way it is not a sequential number series number that you have arranged.

In example, 111, 220, 438, ? , 1746

where you need to count them in a one step or two step calculation to obtain the difference common result according to the series of mixed numbers.

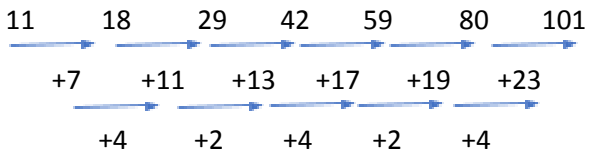
Type of questions asked in exam

Missing number: In this type of series one number is missing in a given series. Such type of series, find the given pattern and find the missing number. Generally, this kind of series is asked in pre-exams.



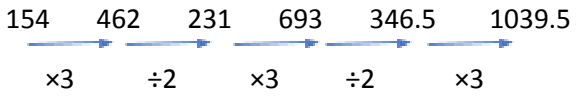
Wrong Number Series: In this type of series one number is odd man out. Which does not follow the sequence. Generally, this kind of series is asked in mains exams.

Note-



Coding Decoding Series: In this type of series firstly one series is given and with the help of first series next number of second series is to be found out.

Generally, this kind of series is asked in relatively tough exams like SBI PO mains and other. They are treated as the tough number series.



How to proceed number series

Examine the difference between adjacent numbers. If the series is increasing find its rate means how fast or how slow the series is increasing. First of all, you need to check logical series i.e., whether the difference is square or cube or close to it. For example, the difference may be 22 +1, 32 +2, 42 +3 and so on. If it is increasing slowly the reason may be addition hence find the difference and then solve. If it is increasing very fast the reason may be multiplication.

Start from the last end and get how many times the last term is from the previous term and if there is any difference then try to find a pattern by moving leftward and solve. If it is decreasing slowly the reason may be different hence find the difference and then solve. If it is decreasing very fast the reason may be division.

Start from the last end and get how many times the last term is from the previous term and if there is any difference then try to find a pattern by moving leftward and solve. If the terms are increasing and decreasing alternatively the reason may be addition and subtraction so you need to find differences and then try to solve them.

If you are still not able to find any pattern better go and try other series. Generally, in exams one or two questions are given very tough and most of the questions follow a very common pattern which you studied in your classrooms so you should need to try to find those types of questions.

Q1. What value will come in place of question mark (?) in the number-series given below?

23 28 38 53 73?

(1) 98

(2) 99

(3) 95

(4) 97

(5) 96

Q2. What value will come in place of question mark (?) in the number-series given below?

7 127 187 217 232?

(1) 237.5

(2) 239.5

(3) 236

(4) 240.5

(5) 241

Q3. What value will come in place of question mark (?) in the number-series given below?

723 712 690 657 613?

(1) 556

(2) 551

(3) 552

(4) 558

(5) None of these

Q4. What should come in place of question marks(?) in the following number series: -

90 110 132 156 182?

(1) 207

(2) 307

(3) 309

(4) 323

(5) 310

Q5. What should come in place of question marks(?) in the following number series: -

2 18 95 384 1155?

(1) 2212

(2) 2629

(3) 2735

(4) 2312

(5) 2412

Q6. What will come in place of question mark (?) in the following number series given below?

5 366 655 ? 1049 1170

(1) 880

(2) 882

(3) 876

(4) 872

(5) None of these

Q7. What will come in place of question mark (?) in the following number series given below?

17 45 148 607 ? 18331

(1) 3048

(2) 3056

(3) 3060

(4) 3052

(5) None of these

Q8. What will come in place of question mark (?) in the following number series given below?

3 8 ? 204 1421 11360

(1) 32

(2) 35

(3) 36

(4) 30

(5) None of these

Q9. What will come in place of question mark (?) in the following number series given below?

15 32 83 168 287 ?

(1) 442

(2) 438

(3) 440

(4) 445

(5) None of these

Q10. What will come in place of question mark (?) in the following number series given below?

31 39 ? 130 255 471

(1) 65

(2) 68

(3) 62

(4) 60

(5) None of these

Q11. What value will come in question mark (?) in the following number series?

23 26 31 38 ? 62

(1) 49

(2) 48

(3) 47

(4) 46

(5) 52

Q12. What value will come in question mark (?) in the following number series?

1 6 13 24 41 ?

(1) 61

(2) 58

(3) 55

(4) 63

(5) None of these

Q13. What value will come in question mark (?) in the following number series?

2 3 14 ? 2068 51705

(1) 121

(2) 129

(3) 127

(4) 123

(5) 130

Q14. What value will come in question mark (?) in the following number series?

6 30 120 600 ? 12000

(1) 2004

(2) 2000

(3) 2200

(4) 2400

(5) 2450

Q15. What will come in place of the question mark (?) in the following number series?

3 7 19 55 163 ?

(1) 467

(2) 487

(3) 475

(4) 485

(5) 312

Q16. What will come in place of the question mark (?) in the following number series?

1598 798 398 198 ? 48

(1) 56

(2) 74

(3) 68

(4) 98

(5) 105

Q17. What will come in place of the question mark (?) in the following number series?

7 8 12 21 37 ?

(1) 64

(2) 63

(3) 62

(4) 61

(5) 125

Q18. What will come in place of the question mark (?) in the following number series?

3 19 115 691 ? 24883

(1) 6923

(2) 4147

(3) 2719

(4) 1463

(5) 3605

Q19. What will come in place of the question mark (?) in the following number series?

6 13 28 59 ? 249

(1) 124

(2) 122

(3) 120

(4) 118

(5) 225

Q20. What will come in place of question mark (?) in the following number series given below?

5 366 655 ? 1049 1170

(1) 880

(2) 882

(3) 876

(4) 872

(5) None of these

Q21. What value will come in place of question mark (?) in the number-series given below?

723 712 690 657 613 ?

(1) 556

(2) 551

(3) 552

(4) 558

(5) None of these

Q22. What should come in place of question marks(?) in the following number series:-

90 110 132 156 182 ?

(1) 207

(2) 307

(3) 309

(4) 323

(5) 210

Q23. What should come in place of question marks(?) in the following number series:-

2 18 95 384 1155 ?

(1) 2212

(2) 2629

(3) 2735

(4) 2312

(5) 2412

Q24. In the following number series what should come at the place of question mark?

12 51 217 993 ?

(1) 4783

(2) 5181

(3) 6043

(4) 1718

(5) None of these

Q25. In the following number series what should come at the place of question mark?

84 92 ? 147 122

(1) 83

(2) 84

(3) 87

(4) 92

(5) None of these

Q26. In the following number series what should come at the place of question mark?

0.8 34 ? 480 966

(1) 144

(2) 160

(3) 175

(4) 156

(5) None of these

Q27. In the following number series what should come at the place of question mark?

1.2 5.4 20.2 107 ?

(1) 680

(2) 544

(3) 209.5

(4) 757

(5) None of these

Q28. In the following number series what should come at the place of question mark?

28 15 7 4.75 ?

(1) 11.25

(2) 2.25

(3) 4.95

(4) 4.75

(5) None of these

Q29. In the following number series, what should come in place of question mark(?)

43 133 275 291 ?

(1) 155

(2) 127

(3) 0

(4) -25

(5) 25

Q30. In the following number series, what should come in place of question mark(?)

424 540 635 711 ?

(1) 775

(2) 770

(3) 745

(4) 795

(5) 812

Q31. In the following number series, what should come in place of question mark(?)

11 31 69 131 ?

(1) 220

(2) 209

(3) 223

(4) 225

(5) Nome of these

Q32. What should come in place of question mark (?) in the following number series?

4372 2691 4455 2606 ?

(1) 4535

(2) 4478

(3) 4542

(4) 4622

(5) None of these

Q33. In the following number series, what should come in place of question mark(?)

12 19 51 197 ?

(1) 975

(2) 977

(3) 1204

(4) 856

(5) None of these

Q34. In the following number series, what should come in place of question mark(?)

24 5 2 1.5 1.5 ?

(1) 3

(2) 4

(3) 2.75

(4) 1.5

(5) 1.75

Q35. In the following number series, what should come in place of question mark(?)

2721 4449 2252 4996 ?

(1) 8371

(2) 1621

(3) 2116

(4) 3871

(5) None of these

Q36. In the following number series, what should come in place of question mark(?)

1.6 6.2 20.6 83.4 ?

(1) 122.5

(2) 424.8

(3) 83.75

(4) 417

(5) None of these

Q37. In the following number series, what should come in place of question mark(?)

64 98 200 508 ?

(1) 1525

(2) 1515

(3) 1540

(4) 1550

(5) None of these

Q38. In the following number series only one number is wrong. Find out the wrong number.

16 18 44 136 548 2744

(1) 16

(2) 18

(3) 136

(4) 2744

(5) None of these

Q39. In the following number series only one number is wrong. Find out the wrong number.

64 165 100 136 120 124

(1) 100

(2) 165

(3) 136

(4) 124

(5) None of these

Q40. In the following number series only one number is wrong. Find out the wrong number.

75 74 146 430 1736 8675

(1) 75

(2) 146

(3) 430

(4) 74

(5) None of these

Q41. In the following number series only one number is wrong. Find out the wrong number.

5 6 15 41 105 230

(1) 15

(2) 6

(3) 41

(4) 5

(5) None of these

Q42. In the following number series only one number is wrong. Find out the wrong number.

15 16 36 116 484

(1) 15

(2) 36

(3) 116

(4) 484

(5) None of these

Q43. What should come in place of a question mark(?) in the following number series ?

28 51 110 229 ?

(1) 445

(2) 515

(3) 619

(4) 439

(5) None of these

Q44. What should come in place of question mark (?) in the following number series?

64 80 ? 210 420

(1) 160

(2) 200

(3) 120

(4) 144

(5) None of these

Q45. What should come in place of question mark (?) in the following number series?

3.1 11.3 48.2 ? 1475

(1) 424.5

(2) 245

(3) 242

(4) 212.5

(5) None of these

Q46. What should come in place of question mark (?) in the following number series?

37.2 21.6 14.8 12.4 ?

(1) 12.2

(2) 12.4

(3) 14.4

(4) 10.4

(5) None of these

Q47. In the following number series, what should come in place of question mark (?)

18 33 57 92 ?

(1) 135

(2) 125

(3) 140

(4) 144

(5) None of these

Q48. In the following number series, what should come in place of question mark (?)

8 16 ? 120 420

(1) 20

(2) 24

(3) 36

(4) 40

(5) None of these

Q49. In the following number series, what should come in place of question mark(?)

19 22 37 ? 135

(1) 69

(2) 72

(3) 75

(4) 81

(5) None of these

Q50. In the following Number series Find the missing term?

11 26 ? 338 1697

(1) 50

(2) 74

(3) 67

(4) 83

(5) None of these

Answers:

Q.1.(1) +5, +10, +15, +20, +25

Q.2.(2) +120, +60, +30, +15, +7.5

Q.3.(4) -11, -22, -33, -44, -55

Q.4.(5) +20, +22, +24, +26, +28

Q.5.(4) 2 × 6 + 6 = 18 18 × 5 +5 = 95 95 × 4 + 4 = 384 384 × 3 + 3 = 1155 1155 × 2+2 = 2312

Q.6.(1) +192, + 172, + 152, +132, +112

Q.7.(4) × 2 +11, × 3 + 13, × 4 + 15, × 5 + 17

Q.8.(2) × 4 -4, × 5 -5, ×6 -6, ×7 -7

Q.9.(3) +17, +51, +85, +119

Q.10.(5) + 23, +33, +43, +53, +63

Q.11.(1) +3, +5, +7, +11, +13

Q.12.(5) Q.13.(2) ×12 + 1, ×22 + 2, ×32 + 3, ×42 + 4, ×52 + 5

Q.14.(4) ×5, ×4, ×5, ×4, ×5

Q.15.(2) × 3 – 2

Q.16.(4) ÷ 2 -1, ...

Q.17.(3) + 12, + 22, + 32, + 42, + 52

Q.18.(2) × 6 + 1, ...

Q.19.(2) × 2 + 1, × 2 +2, × 2 + 3, × 2 + 4, × 2 + 5

Q.20.(1) +192, + 172, + 152, +132, +112

Q.21.(4) -11, -22, -33, -44, -55

Q.22.(5) +20, +22, +24, +26, +28

Q.23.(4) 2 × 6 + 6 = 18 18 × 5 +5 = 95 95 × 4 + 4 = 384 384 × 3 + 3 = 1155 1155 × 2+2 = 2312

Q.24.(2) ×2+33 × 3+43 ×4+53 ×5+63

Q.25.(1) +23 –3 2 +43 –5 2

Q.26.(4) ×5+5×6 ×4+4×5 ×3+3×4 ×2+2×3

Q.27.(4) ×2+3 ×3+4 ×5+6 ×7+8

Q.28.(3) ÷2+1 ÷3+2 ÷4+3 ÷5+4

Q.29.(5) 3+22 2+32 1+42 0+52 and so on

Q.30.(2) add 112 -5 102 -5 9 2 -5 8 2 -5

Q.31.(3) 2 3 +3 3 3 +4 4 3 +5 5 3 +6 6 3 +7

Q.32.(3) -412 +422 -432 +442

Q.33.(2) ×2-5 ×3-6 ×4-7 ×5-8

Q.34.(5) 6 + 1 5 + 1 4 + 1 ÷ 3 + 1 ÷ 2 + 1

Q.35.(2) +123, -133, +143, -153

Q.36.(4) ×2+3 ×3+2 ×4 + 1 × 5+0

Q.37.(3) ×1.5+2 ×2+22 ×2.5+23 ×3 + 24

Q.38.(2) ×1+4, ×2+4, ×3+4 --------

Q.39.(2) +(10)2, -(8)2, +(6)2, -(4)2 --------

Q.40.(3) ×1-1, ×2-2, ×3-3, ×4-4 --------

Q.41.(1) 5+13 = 6, 6+23 = 14, 14+33 = 41 41+43 = 105, 105+53 = 230

Q.42.(3) ×1 + 12, ×2+22, ×3+32 -------

Q.43.(5) 3 3 -4 4 3 -5 5 3 -6 6 3 -7 438 should be next number

Q.44.(3) and so on hence 120 should come at place of question mark

Q.45.(2) 3+2 4+3 5+4 6+5 and so on so 245 should come at place of question mark

Q.46.(1) ÷2+3 ÷2+4 ÷2+5 ÷2+6

Q.47.(3) Add 5×3 6×4 7×5 and so on

Q.48.(4) ×2 ×2.5 ×3 ×3.5 So next term will be 16 2.5=40 ×2 ×2.5 ×3 ×3.5

Q.49.(2) On adding 2 2 -1 4 2 -1 6 2 -1 8 2 -1 hence correct answer will be 37+35=72

Q.50.(4) 11 → 26 → 83 → 338 → 1697

×2+4 ×3+5 ×4+6 ×5+7