

Number Series short Tricks Questions & Solutions

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Number series short Tricks & Questions with solutions

Questions on number series are prevalent in most of the exams. Almost 4-5 Questions comes in exam from this topic. These questions are based on numerical sequences that follow a logical rule/ pattern based on elementary arithmetic concepts. A particular series is given from which the pattern must be analyzed. You are then asked to predict the next number in the sequence following the same rule.

Number series is a arrangement of numbers in a certain order, where some numbers are wrongly put into the series of numbers and some number is missing in that series, we need to observe and find the accurate number to the series of numbers.

Tips For Number Series

- 1) Try to observe if there are any familiar numbers in the given series.
- 2) Familiar numbers are the numbers which are easy to identify like primes numbers, perfect squares, cubes.
- 3) If you are unable to find familiar number, Calculate the differences between the numbers and observe the pattern in the differences.
- 4) If the differences are growing slowly it might be an addition or subtraction series or If the differences are growing rapidly it might be a square series, cube series, or multiplicative series.
- 5) If the differences also are not having any pattern then observe every alternate number (ie every 3rd number form a series) for any pattern.
- 6) The possible cases may be like sum or the average of two consecutive numbers gives 3rd number.
- 7) If still you do not find any pattern, it signifies that the series follows a complex pattern. Check for cases like multiplying the number and adding/subtracting a constant number from it to reach the pattern.

Below are the common pattern of questions usually asked in numbers series:

I. Fibonnaci Series

The Fibonnaci sequence is a series of numbers where a no. is found by adding up the nos. before it. Let us understand the series with the help of an example:

Example 1:

0,1,1,2,3,5,8,13,21,____.



Example 2:

20, 12, 32, 44, 76, 120,____.

$$\begin{array}{ccccccc}
 20 & 12 & 32 & 44 & 76 & 120 & \\
 \swarrow & \searrow & \swarrow & \searrow & \swarrow & \searrow & \\
 & 32 & 44 & 76 & 120 & 196 &
 \end{array}$$

II. Addition series

There can be 2 types of pattern in addition series.

(A) Same number Addition series

In this type of series, the difference between 2 consecutive elements is same i.e. same digit is to be added to the previous element to obtain the next element.

Example 3:

3, 6, 9, 15, 18, ____.

Sol. In the given series, the difference between the two consecutive elements is same i.e 3.

In this type of series, the number added to each term is in increasing order.

$$\begin{array}{ccccccc}
 3 & 6 & 9 & 12 & 15 & 18 & \\
 \rightarrow & \rightarrow & \rightarrow & \rightarrow & \rightarrow & & \\
 +3 & +3 & +3 & +3 & +3 & &
 \end{array}$$

(B) Increasing order Addition series

In the given series, the difference between 2 consecutive numbers is in increasing order.

Example 4:

2, 5, 9, 14, 20, 27, ____.

Sol. In the given series, the difference between 2 consecutive numbers is in increasing order i.e 3,4,5,6,7 and 8 respectively.

$$\begin{array}{ccccccc}
 2 & 5 & 9 & 14 & 20 & 27 & 35 \\
 \rightarrow & \rightarrow & \rightarrow & \rightarrow & \rightarrow & \rightarrow & \\
 +3 & +4 & +5 & +6 & +7 & +8 &
 \end{array}$$

III. Subtraction series

(A) Same Number Subtraction Series

In this type of series, each time the same number is subtracted from the previous element to obtain the next element.

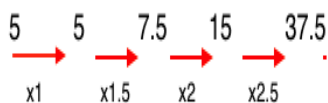
Example 5:

52, 49, 46, 43, 40, ____.

Sol. Here the difference between 2 consecutive nos. is 3.

$$\begin{array}{ccccccc}
 52 & 49 & 46 & 43 & 40 & 37 & \\
 \rightarrow & \rightarrow & \rightarrow & \rightarrow & \rightarrow & & \\
 -3 & -3 & -3 & -3 & -3 & &
 \end{array}$$

(B) Increasing order Subtraction Series

Example 6:**94, 90, 85, 79, 72, 64, ____.***Sol. Here the difference between 2 consecutive elements is in increasing order.***IV. Multiplication Series****(A) Same number multiplication Series***In this series, the ratio between 2 consecutive elements is same.***Example 7:****4, 12, 36, 108, 324, ____.***In the given series, previous element is multiplied by 3 to obtain the next element and therefore the ratio between 2 consecutive elements is same.***(B) Increasing order of Multiplication Series***In this type of series, elements are multiplied in increasing order to find the next element.***Example 8:****5, 5, 7.5, 15, ____.***In the given series, the ratio between 2 consecutive elements is in increasing order and elements are multiplied by the numbers in increasing order.***V. Division series****(A) Same number division series***In this type, each time the previous element is divided by same digit to obtain the next element.***Example 9:****1600, 400, 100, 25, ____.***Sol. In the given series, previous element is divided by 4 to get the next element.*

$$1600/4 = 400$$

$$400/4 = 100$$

$$100/4 = 25$$

$$25/4 = 6.25$$

Therefore, the correct answer = 6.25

(B) Increasing/Decreasing order division series**Example 10:**

46080, 3840, 384, 48, 8, 2, ____.

Sol. In the given series, elements are divided by 12, 10, 8, 6 and 4 respectively to obtain the next elements.

$$\begin{array}{ccccccc}
 46080 & \xrightarrow{\quad} & 3840 & \xrightarrow{\quad} & 384 & \xrightarrow{\quad} & 48 & \xrightarrow{\quad} & 8 & \xrightarrow{\quad} & 2 \\
 & /12 & & /10 & & /8 & & /6 & & /4 &
 \end{array}$$

VI. Addition & Multiplication together**Example 11:**

1, 3, 7, 15, 31, ____.

Sol. In such a series, addition and multiplication is used together.

$$\begin{array}{ccccccc}
 1 & \xrightarrow{\quad} & 3 & \xrightarrow{\quad} & 7 & \xrightarrow{\quad} & 15 & \xrightarrow{\quad} & 31 & \xrightarrow{\quad} & 63 \\
 & 1 \times 2 + 1 & & 3 \times 2 + 1 & & 7 \times 2 + 1 & & 15 \times 2 + 1 & & 31 \times 2 + 1 &
 \end{array}$$

Example 12:

5, 6, 14, 45, 184, ____.

Sol. In this series, the previous elements are multiplied respectively by numbers in increasing order & numbers in increasing order respectively added in such multiplication to obtain the next element.

$$\begin{array}{ccccccc}
 5 & \xrightarrow{\quad} & 6 & \xrightarrow{\quad} & 14 & \xrightarrow{\quad} & 45 & \xrightarrow{\quad} & 184 & \xrightarrow{\quad} & 925 \\
 & 5 \times 1 + 1 & & 6 \times 2 + 2 & & 14 \times 3 + 3 & & 45 \times 4 + 4 & & 184 \times 5 + 5 &
 \end{array}$$

VII. Decimal Fraction**Example 13:**

36, 18, 18, 27, 54, ____.

Sol. In this series, following pattern is used:

$$\begin{array}{ccccccc}
 36 & \xrightarrow{\quad} & 18 & \xrightarrow{\quad} & 18 & \xrightarrow{\quad} & 27 & \xrightarrow{\quad} & 54 & \xrightarrow{\quad} & 135 \\
 & \times 0.5 & & \times 1 & & \times 1.5 & & \times 2 & & \times 2.5 &
 \end{array}$$

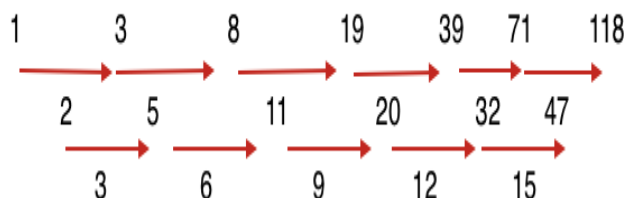
VIII. Difference of difference series

Calculate the differences between the numbers given in the series provided in the question. Then try to observe the pattern in the new set of numbers that you have obtained after taking out the difference.

Example 14:

1, 3, 8, 19, 39, 71, ____.

Sol. The following pattern is observed in the given series



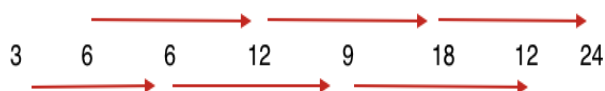
IX. Twin series

In this type of series, odd place element makes one series while the even place elements make another series.

Example 15:

3, 6, 6, 12, 9, 18, ____.

Sol. In this series, following pattern is used:

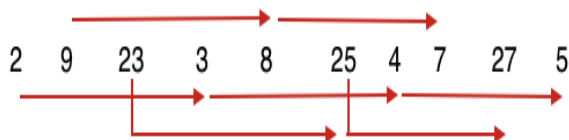


X. Tri-series

Example 16:

2, 9, 23, 3, 8, 25, 4, ____.

Sol. Following pattern is used in the given series



XI. Square series & Cube series

Example 17:

4, 9, 16, 25, 36, 49, ____.

Sol. In the given series, the following pattern is used

$2^2, 3^2, 4^2, 5^2, 6^2, 7^2, 8^2$

Example 18:

Sol. In the given series, the following pattern is used

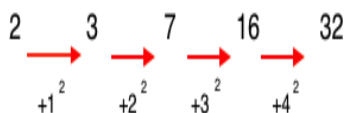
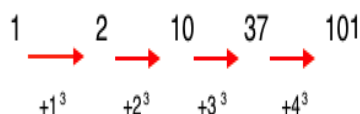
$1^3, 2^3, 3^3, 4^3, 5^3, 6^3$

XII. Square & Cube addition

Example 19:

2, 3, 7, 16, ____.

Sol. In the given series, the following pattern is used

**Example 20:****1, 2, 10, 37, ____.****Sol.** In the given series, the following pattern is used**XIII. Digital Operation of Numbers**

In this type of series, the digits of each number are operated in a certain way to obtain the next element of the series.

Example 21:**94, 36, 18, ____.****Sol.** In the given series, the following pattern is used

$$9 * 4 = 36$$

$$3 * 6 = 18$$

$$1 * 8 = 8$$

Correct answer - 8

- **Prime Series :** IN which the terms are the prime numbers in Order
 - **Ex :** 2, 3, 5, 7, 11, 13, _, 19
 - Here the terms of the series are the prime numbers in order. The prime number after 13 is 17. So the answer to this question is 17.
- **Alternate Primes :**
 - **Ex:** 2, 5, 11, 17, 23, _, 41
 - Here the series is framed by taking the alternative prime numbers. After 23, the prime numbers are 29 and 31. So the answer is 31.
- **Every Third number can be the sum of the preceding two numbers:**
 - **Ex :** 3, 5, 8, 13, 21
 - Here starting from third number
 - $3 + 5 = 8$
 - $5 + 8 = 13$
 - $8 + 13 = 21$
 - So, the answer is $13 + 21 = 34$
- **Every Third number can be the product of the preceeding two numbers**
 - **Ex :** 1, 2, 2, 4, 8, 32. _
 - Here starting from the third number
 - $1 \times 2 = 2$
 - $2 \times 2 = 4$

- $2 \times 4 = 8$
- $4 \times 8 = 32$
 - So, the answer is $8 \times 32 = 256$
- **The difference of any term from its succeeding term is constant (either increasing series or decreasing series) :**
 - **Ex : 4, 7, 10, 13, 16, 19, _ , 25**
 - Here the difference of any term from its succeeding term is 3.
 - $7 - 4 = 3$
 - $10 - 7 = 3$
 - So, the answer is $19 + 3 = 22$
 - **The difference between two consecutive terms will be either increasing or decreasing by a constant number :**
 - **Ex : 2, 10, 26, 50, 82, _**
 - Here, The difference between two consecutive terms are
 - $10 - 2 = 8$
 - $26 - 10 = 16$
 - $50 - 26 = 24$
 - $82 - 50 = 32$
 - Here, the difference is increased by 8 (or you can say the multiples of 8). So the next difference will be 40 ($32 + 8$). So, the answer is $82 + 40 = 122$
 - **Ex : 63, 48, 35, 24, 15, _**
 - Here, the difference between the two terms are
 - $63 - 48 = 15$
 - $48 - 35 = 13$
 - $35 - 24 = 11$
 - $24 - 15 = 9$
 - Here, the difference is decreased by 2. So, the next difference will be 7. So, the answer is $15 - 7 = 8$.
 - **The difference between two numbers can be multiplied by a constant number :**
 - **Ex : 15, 16, 19, 28, 55, _**
 - Here, the differences between two numbers are
 - $16 - 15 = 1$
 - $19 - 16 = 3$
 - $28 - 19 = 9$
 - $55 - 28 = 27$
 - Here, the difference is multiplied by 3. So, the next difference will be 81. So, the answer is $55 + 81 = 136$
 - **The difference can be multiplied by numbers which will be increasing by a constant number :**
 - **Ex : 2, 3, 5, 11, 35, _**
 - The difference between two numbers are
 - $3 - 2 = 1$
 - $5 - 3 = 2$
 - $11 - 5 = 6$
 - $35 - 11 = 24$

- Here, the differences are multiplied by numbers which are in increasing order.
- Differences are
 - 1
 - $1 \times 2 = 2$
 - $2 \times 3 = 6$
 - $6 \times 4 = 24$
 - So, the next difference will be $24 \times 5 = 120$. So, the answer is $35 + 120 = 155$.
- Every succeeding term is got by multiplying the previous term by a constant number or numbers which follow a special pattern.
 - Ex : 5, 15, 45, 135, _
 - Here, $5 \times 3 = 15$
 - $15 \times 3 = 45$
 - $45 \times 3 = 135$
 - So, the answer is $135 \times 3 = 405$.
 - Ex : 2, 10, 40, 120, 240, _
 - Here, $2 \times 5 = 10$
 - $10 \times 4 = 40$
 - $40 \times 3 = 120$
 - $120 \times 2 = 240$
 - So, the answer is $240 \times 1 = 240$
 - In certain series the terms are formed by various rule (miscellaneous rules). By keen observation you have to find out the rule and the appropriate answer.
 - Ex : 4, 11, 31, 90, _
 - Terms are,
 - $4 \times 3 - 1 = 11$
 - $11 \times 3 - 2 = 31$
 - $31 \times 3 - 3 = 90$
 - So, the answer will be $90 \times 3 - 4 = 266$
 - Ex : 3, 5, 14, 55, _
 - Terms are,
 - $3 \times 2 - 1 = 5$
 - $5 \times 3 - 1 = 14$
 - $14 \times 4 - 1 = 55$
 - So, the answer will be $55 \times 5 - 1 = 274$
 - Ex : 3, 7, 23, 95, _
 - Terms are,
 - $3 \times 2 + 1 = 7$
 - $7 \times 3 + 2 = 23$
 - $23 \times 4 + 3 = 95$
 - So, the answer will be $95 \times 5 + 4 = 479$
 - Ex : 6, 17, 38, 79, _
 - Terms are,
 - $6 \times 2 + 5 = 17$
 - $17 \times 2 + 4 = 38$

- $38 \times 2 + 3 = 79$
 - So, the answer is $79 \times 2 + 2 = 160$

Number Series Questions

1. 16, 8.5, 9.5, 21, 88, ?

- (A) 512 (B) 624
(C) 712 (D) 848
(E) 976

2. 28, 32, 23, 39, 14, 50, ?

- (A) 1 (B) 5
(C) 14 (D) 24
(E) 62

3. 4, 9, 17, ?, 69, 139, 277

- (A) 28 (B) 35
(C) 42 (D) 51
(E) None of these

4. 5, 6, 16, ?, 244, 1245

- (A) 28 (B) 55
(C) 57 (D) 61
(E) None of these

5. 3, 14, 39, ?, 155, 258

- (A) 84 (B) 88
(C) 92 (D) 96
(E) 104

6. 8, 9, 15, 32, ?, 250.5

- (A) 61 (B) 65.5
(C) 82.5 (D) 87
(E) 99

7. 4, 6, 16, 56, 240, ?

- (A) 680 (B) 840
(C) 960 (D) 1020

(E) 1232

8. 1, 2, 10, 37, ?, 226.

- (A) 75 (B) 84
(C) 95 (D) 101
(E) 111

9. 5, 11, 20, 43, 82, ?

- (A) 135 (B) 147
(C) 155 (D) 169
(E) 234

10. 4, 5, 8, 28, 104, ?

- (A) 425 (B) 484
(C) 504 (D) 522
(E) 536

11. 2, 4, 10, 22, 42, 72, ?

- (A) 102 (B) 106
(C) 114 (D) 124
(E) 132

12. 4, 2, 2, 4, 16, ?

- (A) 64 (B) 72
(C) 96 (D) 128
(E) 156

13. 15, 15, 30, 10, 40, ?, 48

- (A) 8 (B) 20
(C) 24 (D) 40
(E) 60

14. 2, 3, 8, 27, 112, ?

- (A) 156 (B) 224
(C) 375 (D) 480
(E) 565

15. 5, 6, 10, 33, 128, ?

- (A) 375 (B) 445
(C) 565 (D) 645

(E) 675

16. 27, 50, 192, 1140, 9104, ?

(A) 90400 (B) 91020

(C) 92040 (D) 94060

(E) None of these

17. 4, 7, 13, 23, 38, 59, ?

(A) 72 (B) 80

(C) 87 (D) 95

(E) None of these

18. 6, 11, 32, 111, 464, ?

(A) 2345 (B) 2475

(C) 2525 (D) 3050

(E) None of these

19. 2, 12, 36, 80, ?, 252, 392

(A) 80 (B) 100

(C) 120 (D) 150

(E) None of these

20. 2, 6, 33, 49, 174, 210, ?

(A) 275 (B) 387

(C) 464 (D) 553

(E) None of these

21. 6, 8, 14, 26, 46, 76, ?

(A) 84 (B) 96

(C) 112 (D) 118

(E) 124

22. 4, 4, 6, 12, 30, ?, 315

(A) 60 (B) 75

(C) 90 (D) 115

(E) 120

23. 3, 4, 10, 33, ?, 645, 4116

(A) 84 (B) 112

(C) 136 (D) 156

(E) 224

24. 2, 3, 4, 15, 56, ?, 1704

(A) 112 (B) 156

(C) 192 (D) 234

(E) 285

25. 6, 7, 12, 26, 67.5, ?

(A) 125 (B) 145.5

(C) 175 (D) 205.5

(E) 230

26. 8, 10, 24, 78, 320, ? , 9672

(A) 740 (B) 960

(C) 1240 (D) 1440

(E) 1610

27. 2, 10, 37, 101, 226, ?

(A) 324 (B) 442

(C) 526 (D) 636

(E) 784

28. 3, 7, 17, 39, 79, 143, ?

(A) 178 (B) 237

(C) 264 (D) 301

(E) 336

29. 4, 5, 8, 28, 104, ?

(A) 208 (B) 312

(C) 424 (D) 536

(E) 576

30. 12, 15, 25, 42, 66, 97, ?

(A) 135 (B) 144

(C) 156 (D) 167

(E) 182

31. 1, 3, 10, 38, 168, ?

(A) 540 (B) 654

(C) 724 (D) 872

(E) None of these

32. 1, 2, 10, 37, ?, 226

- (A) 75 (B) 84
(C) 95 (D) 101
(E) 111

33. 4, 7, 13, 23, 38, 59, ?

- (A) 72 (B) 80
(C) 87 (D) 95
(E) None of these

34. 5, 3, 4, 7.5, 17, ?

- (A) 35 (B) 42
(C) 45 (D) 50
(E) 56

35. 9, 11, 20, 31, 51, 82, (?)

- (A) 133 (B) 142
(C) 156 (D) 164
(E) None of these

36. 5, 6, 10, 19, 35, 60, ?

- (A) 84 (B) 96
(C) 112 (D) 125
(E) 144

37. 24, 28, 19, 35, 10, ?

- (A) 45 (B) 44
(C) 46 (D) 42
(E) 47

38. 2, 5, 9, 19, 37, ?

- (A) 72 (B) 75
(C) 80 (D) 84
(E) None of these

39. 4, 9, 17, ?, 69, 139, 277

- (A) 28 (B) 35
(C) 42 (D) 51
(E) None of these

40. 5, 6, 16, ?, 244, 1245

(A) 34 (B) 48

(C) 57 (D) 72

(E) None of these

41. 2, 7, 15, 27, 44, 67, ?

(A) 75 (B) 84

(C) 97 (D) 108

(E) 119

42. 2, 6, 11, 20, ?, 36, 56

(A) 24 (B) 26

(C) 28 (D) 30

(E) None of these

43. 12, 25, 48, 99, 194, 393, ?

(A) 715 (B) 730

(C) 750 (D) 780

(E) None of these

44. 7, 14, 25, 40, 59, 82, ?

(A) 99 (B) 109

(C) 120 (D) 135

(E) None of these

45. 9, 15, 25, 41, 65, 99, ?

(A) 125 (B) 135

(C) 145 (D) 155

(E) None of these

46. 2, 2, 3, 6, 15, 45, 157.5, ?

(A) 250 (B) 320

(C) 450 (D) 630

(E) None of these

47. 9, 5, 6, 10.5, 23, 60, ?

(A) 132 (B) 148

(C) 164 (D) 183

(E) None of these

48. 16, 20, 29, 45, 70, 106, ?

(A) 155 (B) 172

(C) 184 (D) 196

(E) None of these

49. 7, 12, 29, 92, 373, ?

(A) 1442 (B) 1654

(C) 1870 (D) 1966

(E) None of these

50. 4, 9, 20, 37, 60, 89, ?

(A) 124 (B) 132

(C) 144 (D) 156

(E) None of these

Solutions

1. Answer is option C

Explanation:

$$16 \times 0.5 + 0.5 = 4.5$$

$$8.5 \times 1 + 1 = 9.5$$

$$9.5 \times 2 + 2 = 21$$

$$21 \times 4 + 4 = 84$$

$$84. \quad 8 + 8 = 712$$

2. Answer is option A

Explanation:

$$28 + 2^2 = 28 + 4 = 32$$

$$32 - 3^2 = 32 - 9 = 23$$

$$23 + 4^2 = 23 + 16 = 39$$

$$39 - 5^2 = 39 - 25 = 14$$

$$14 + 6^2 = 14 + 36 = 50$$

$$50. \quad - 7^2 = 50 - 49 = 1$$

3. Answer is option B

Explanation:

$$\begin{aligned}4 \\ 9 &= 4 \times 2 + 1 \\ 17 &= 9 \times 2 - 1 \\ 35 &= 17 \times 2 + 1 \\ 69 &= 35 \times 2 - 1 \\ 139 &= 69 \times 2 + 1 \\ 277 &= 139 \times 2 - 1\end{aligned}$$

4. Answer is option C

Explanation:

$$\begin{aligned}5 \\ 5 \times 1 + 1^2 &= 5 + 1 = 6 \\ 6 \times 2 + 2^2 &= 12 + 4 = 16 \\ 16 \times 3 + 3^2 &= 48 + 9 = 57 \\ 57 \times 4 + 4^2 &= 228 + 16 = 244 \\ 244 &= 5 + 5^2 = 1245\end{aligned}$$

5. Answer is option A

Explanation:

$$\begin{aligned}1 + 1^2 + 1^2 &= 3 \\ 2 + 2^2 + 2^2 &= 14 \\ 3 + 3^2 + 3^2 &= 39 \\ 4 + 4^2 + 4^2 &= 84 \\ 5 + 5^2 + 5^2 &= 155 \\ 6 + 6^2 + 6^2 &= 258\end{aligned}$$

6. Answer is option C

Explanation:

$$\begin{aligned}8 * 1 + 1 &= 9 \\ 9 * 1.5 + 1.5 &= 15 \\ 15 * 2 + 2 &= 32 \\ 32 * 2.5 + 2.5 &= 82.5 \\ 82.5 * 3 + 3 &= 250.5\end{aligned}$$

7. Answer is option E

Explanation:

$$4 * 1 + 2 = 6$$

$$\begin{aligned}6*2+4 &= 16 \\16*3+8 &= 56 \\56*4+16 &= 240 \\240*5+32 &= 1232\end{aligned}$$

8. Answer is option D

Explanation:

$$\begin{aligned}1+13 &= 2 \\2+23 &= 10 \\10+33 &= 37 \\37+43 &= 101 \\101+53 &= 226\end{aligned}$$

9. Answer is option D

Explanation:

$$\begin{aligned}5*2+1 &= 11 \\11*2-2 &= 20 \\20*2+3 &= 43 \\43*2-4 &= 82 \\82*2+5 &= 169\end{aligned}$$

10. Answer is option E

Explanation:

$$\begin{aligned}4*1+1 &= 5 \\5*2-2 &= 8 \\8*3+4 &= 28 \\28*4-8 &= 104 \\104*5+16 &= 536\end{aligned}$$

11. Answer is option C

Explanation:

$$\begin{aligned}2+1^2+1 &= 4 \\4+2^2+2 &= 10 \\10+3^2+3 &= 22 \\22+4^2+4 &= 42 \\42+5^2+5 &= 72 \\72+6^2+6 &= 114\end{aligned}$$

12. Answer is option D

Explanation:

$$\begin{aligned}4* .5 &= 2 \\2*1 &= 2\end{aligned}$$

$$\begin{aligned}2*2 &= 4 \\4*4 &= 16 \\16*8 &= 128\end{aligned}$$

13. Answer is option A

Explanation:

$$\begin{aligned}15/1 &= 15 \\15*2 &= 30 \\30/3 &= 10 \\10*4 &= 40 \\40/5 &= 8 \\8*6 &= 48\end{aligned}$$

14. Answer is option D

Explanation:

$$\begin{aligned}2*1+1 &= 3 \\3*2+2 &= 8 \\8*3+3 &= 27 \\27*4+4 &= 112 \\112*5+5 &= 565\end{aligned}$$

15. Answer is option D

Explanation:

$$\begin{aligned}5*1+1 &= 6 \\6*2-2 &= 10 \\10*3+3 &= 33 \\33*4-4 &= 128 \\128*5+5 &= 645\end{aligned}$$

16. Answer is option B

Explanation:

$$\begin{aligned}27, 50, 192, 1140, 9104, ? \\27*2-4 &= 50 \\50*4-8 &= 192 \\192*6-12 &= 1140 \\1140*8-16 &= 9104 \\9104*10-20 &= 91020\end{aligned}$$

17. Answer is Option C

Explanation:

4, 7, 13, 23, 38, 59, ?

✓ ✓ ✓ ✓ ✓ ✓

3 6 10 15 21 28

✓ ✓ ✓ ✓ ✓

3 4 5 6 7

There should be $59 + 28 = 87$

18. Answer is option A

Explanation:

6, 11, 32, 111, 464, ?

$$6 * 1 + 5 = 11$$

$$11 * 2 + 10 = 32$$

$$32 * 3 + 15 = 111$$

$$111 * 4 + 20 = 464$$

$$464 * 5 + 25 = 2345$$

19. Answer is option D Explanation:

2, 12, 36, 80, ?, 252, 392

$$1^2 + 1^3 = 2$$

$$2^2 + 2^3 = 12$$

$$3^2 + 3^3 = 36$$

$$4^2 + 4^3 = 80$$

$$5^2 + 5^3 = 150$$

$$6^2 + 6^3 = 252$$

$$7^2 + 7^3 = 392$$

20. Answer is option D

Explanation:

2, 6, 33, 49, 174, 210, ?

$$1 + 1^3 = 2$$

$$2 + 2^2 = 6$$

$$6 + 3^3 = 33$$

$$33 + 4^2 = 49$$

$$49 + 5^3 = 174$$

$$174 + 6^2 = 210$$

$$210 + 7^3 = 553$$

21. Answer is Option D

Explanation:

6, 8, 14, 26, 46, 76, ?

$$\begin{array}{cccccc} \vee & \vee & \vee & \vee & \vee & \vee \\ \vee & \vee & \vee & \vee & \vee & \vee \\ 2 & 6 & 12 & 20 & 30 & 42 \\ \vee & \vee & \vee & \vee & \vee & \vee \\ 4 & 6 & 8 & 10 & 12 & \end{array}$$
There should be $76+42 = 118$

22. Answer is option C Explanation:

$$4*1 = 4$$

$$4*1.5 = 6$$

$$6*2 = 12$$

$$12*2.5 = 30$$

$$30*3 = 90$$

$$90*3.5 = 315$$

23. Answer is option C Explanation:

$$3*1+1 = 4$$

$$4*2+2 = 10$$

$$10*3+3 = 33$$

$$33*4+4 = 136$$

$$136*5+5 = 685$$

$$685*6+6 = 4116$$

24. Answer is option E Explanation:

$$2*1+1 = 3$$

$$3*2-2 = 4$$

$$4*3+3 = 15$$

$$15*4-4 = 56$$

$$56*5+5 = 285$$

$$285*6-6 = 1704$$

25. Answer is option D Explanation:

$$6*1+1 = 7$$

$$7*1.5+1.5 = 12$$

$$12*2+2 = 26$$

$$26*2.5+2.5 = 67.5$$

$$67.5*3+3 = 205.5$$

26. Answer is option E Explanation:

$$\begin{aligned}
 8*1+2 &= 10 \\
 10*2+4 &= 24 \\
 24*3+6 &= 78 \\
 78*4+8 &= 320 \\
 320*5+10 &= 1610 \\
 1610*6+12 &= 9672
 \end{aligned}$$

27. Answer is option B Explanation:

$$\begin{aligned}
 1+1^3 &= 2 \\
 2+2^3 &= 10 \\
 10+3^3 &= 37 \\
 37+4^3 &= 101 \\
 101+5^3 &= 226 \\
 226+6^3 &= 442
 \end{aligned}$$

28. Answer is Option B

Explanation:

3, 7, 17, 39, 79, 143, ?

V V V V V V

4 10 22 40 64 94

V V V V V

6 12 18 24 30

There should be $143+94 = 237$ **29. Answer is option D Explanation:**

$$\begin{aligned}
 4*1+1 &= 5 \\
 5*2-2 &= 8 \\
 8*3+4 &= 28 \\
 28*4-8 &= 104 \\
 104*5+16 &= 536
 \end{aligned}$$

30. Answer is option A

Explanation:

12, 15, 25, 42, 66, 97, ?

V V V V V V

3 10 17 24 31 38

V V V V V

7 7 7 7 7

There should be $97+38 = 135$ **31. Answer is option D**

Explanation:

$$1*1+2 = 3$$

$$3 \times 2 + 4 = 10$$

$$10 \times 3 + 8 = 38$$

$$38 \times 4 + 16 = 168$$

$$168 \times 5 + 32 = 872$$

32. Answer is option D Explanation:

$$1 + 1^3 = 2$$

$$2 + 2^3 = 10$$

$$10 + 3^3 = 37$$

$$37 + 4^3 = 101$$

$$101 + 5^3 = 226$$

33. Answer is option C

Explanation:

4, 7, 13, 23, 38, 59, ?

✓ ✓ ✓ ✓ ✓ ✓

3 6 10 15 21 28

✓ ✓ ✓ ✓ ✓ ✓

3 4 5 6 7

There should be $59 + 28 = 87$

34. Answer is option C

Explanation:

$$5 \times 0.5 + 0.5 = 3$$

$$3 \times 1 + 1 = 4$$

$$4 \times 1.5 + 1.5 = 7.5$$

$$7.5 \times 2 + 2 = 17$$

$$17 \times 2.5 + 2.5 = 45$$

35. Answer is option A

Explanation:

$$9 + 11 = 20$$

$$11 + 20 = 31$$

$$31 + 51 = 82$$

$$82 + 51 = 133$$

36. Answer is option B

$$5 + (1^2) = 5 + 1 = 6$$

$$6 + (2^2) = 6 + 4 = 10$$

$$10 + (3^2) = 10 + 9 = 19$$

$$19 + (4^2) = 19 + 16 = 35$$

$$35 + (5^2) = 35 + 25 = 60$$

$$60 + (6^2) = 60 + 36 = 96$$

37. Answer is option C

Explanation:

$$24 + 2^2 = 24 + 4 = 28$$

$$28 - 3^2 = 28 - 9 = 19$$

$$19 + 4^2 = 19 + 16 = 35$$

$$35 - 5^2 = 35 - 25 = 10$$

$$10 + 6^2 = 10 + 36 = 46$$

38. Answer is option B

Explanation

2, 5, 9, 19, 37,

The pattern is: every number is arrived at previous number multiplied by 2 and then alternate addition and subtraction by 1 i.e.

2

$$5 = 2 \times 2 + 1$$

$$9 = 5 \times 2 - 1$$

$$19 = 9 \times 2 + 1$$

$$37 = 19 \times 2 - 1$$

the next term $37 \times 2 + 1 = 75$

39. Answer is option B

Explanation:

$$9 = 4 \times 2 + 1$$

$$17 = 9 \times 2 - 1$$

$$35 = 17 \times 2 + 1$$

$$69 = 35 \times 2 - 1$$

$$139 = 69 \times 2 + 1$$

$$277 = 139 \times 2 - 1$$

40. Answer is option C

Explanation:

$$5 \times 1 + 12 = 5 + 1 = 6$$

$$6 \times 2 + 22 = 12 + 4 = 16$$

$$16 \times 3 + 32 = 48 + 9 = 57$$

$$57 \times 4 + 42 = 228 + 16 = 244$$

$$244 \times 5 + 52 = 1245$$

Q41. Answer is option C

Explanation:

2, 7, 15, 27, 44, 67, 97

✓ ✓ ✓ ✓ ✓ ✓

5 8 12 17 23 30

✓ ✓ ✓ ✓ ✓

3 4 5 6 7

There should be $67+30 = 97$

Q42. Answer is option D

Explanation:

2, 6, 12, 20, ?, 36, 56

$$1+1^2 = 2$$

$$2+2^2 = 6$$

$$3+3^2 = 12$$

$$4+4^2 = 20$$

$$5+5^2 = 30$$

$$6+6^2 = 36$$

$$7+7^2 = 56$$

Q43. Answer is option D

Explanation:

$$12 \times 2 + 1 = 25$$

$$25 \times 2 - 2 = 48$$

$$48 \times 2 + 3 = 99$$

$$99 \times 2 - 4 = 194$$

$$194 \times 2 + 5 = 393$$

$$393 \times 2 - 6 = 780$$

Q44. Answer is option B

Explanation:

7, 14, 25, 40, 59, 82, 109

$$\begin{array}{ccccccc} \vee & \vee & & \vee & \vee & \vee & \vee \end{array}$$

7 11 15 19 23 27

$$\begin{array}{ccccccc} \vee & \vee & & \vee & \vee & \vee & \vee \end{array}$$

4 4 4 4 4

There should be $82+27 = 109$

Q45. Answer is option C

Explanation:

9, 15, 25, 41, 65, 99, ?

$$\begin{array}{ccccccc} \vee & \vee & & \vee & \vee & \vee & \vee \end{array}$$

6 10 16 24 34 46

$$\begin{array}{ccccccc} \vee & \vee & \vee & \vee & \vee & \vee & \vee \end{array}$$

4 6 8 10 12

There should be $99+46 = 145$

Q46. Answer is option D Explanation:

2, 2, 3, 6, 15, 45, 157.5, ?

$$2 * 1 = 2$$

$$2 * 1.5 = 3$$

$$3 * 2 = 6$$

$$6 * 2.5 = 15$$

$$15 * 3 = 45$$

$$45 * 3.5 = 157.5$$

$$157.5 * 4 = 630$$

Q47. Answer is option D Explanation:

$$9 * .5 + .5 = 5$$

$$5 * 1 + 1 = 6$$

$$6 * 1.5 + 1.5 = 10.5$$

$$10.5 * 2 + 2 = 23$$

$$23 * 2.5 + 2.5 = 60$$

$$60 * 3 + 3 = 183$$

Q48. Answer is option A

Explanation:

16, 20, 29, 45, 70, 106, ?

√ √ √ √ √ √

4 9 16 25 36 49

Squares of consecutive numbers, the next term should be $106 + 49 = 155$

Q49. Answer is option C Explanation:

$$7 * 1 + 5 = 12$$

$$12 * 2 + 5 = 29$$

$$29 * 3 + 5 = 92$$

$$92 * 4 + 5 = 373$$

$$373 * 5 + 5 = 1870$$

Q50. Answer is option A

Explanation:

4, 9, 20, 37, 60, 89, ?

√ √ √ √ √ √

5 11 17 23 29 35

√ √ √ √ √

6 6 6 6 6

There should be $89 + 35 = 124$

Number Series Questions

1. 4,3,5,24,55,?
2. 16,13.9,18.1,11.8,?
3. 2160,?,72,18,6,3
4. 6,3,3,4.5,9,?
5. 24,?,44,80,144,244
6. 1440,?,48,12,4,2
7. 22,19.7,24.3,17.4,?,15.1
8. 5, 4, 7, 20, 79, ?
9. 32, ?, 52, 88, 152, 252
10. 21, 37, 40.2, 88.2, 94.6, ?
11. 142, 70, 34, 16, ?, 2.5
12. 17, 9, 10, 16.5, 35, ?
13. 89, 86, 78, 63, 41, ?
14. 1, 3, 4, 8, 15, 27, ?
15. 5760, ?, 1440, 160, 10, 0.4
16. 8, 5, 6, 10, 21, ?
17. 339, ?, 345, 353, 369
18. 38, ?, 25.2, 18.8, 22
19. 0.5, 1, 5, 40, 440, ?
20. 0.1, 0.2, 1, 8, 88, ?
21. 9, 31.4, 20.2, 25.8, 23, ?
22. 10, 6, 7, 11.5, 24, ?
23. 2880, ?, 720, 80, 5, 0.2
24. 259, ?, 253, 245, 229, 197
25. 8, 4, 4, 6, 12, 32
26. 7, 16, 45, 184, 915, ?
27. 11, 20, 38, 74, ? 290
28. 15, 21, 38, 65, 101, ?
29. 24, 28, 19, 35, 10, ?
30. 14, 6, 4, 4, 8, ?

Solution

Q1) $4 \times 1 - 1 = 3$

$3 \times 2 - 1 = 5$

$5 \times 3 - 1 = 14$

$14 \times 4 - 1 = 55$

$55 \times 5 - 1 = 274$

Answer: 274

Q2) $16 - 2.1 = 13.9$
 $13.9 + 2.1 \times 2 = 18.1$
 $18.1 - 2.1 \times 3 = 11.8$
 $11.8 + 2.1 \times 4 = 20.2$
Answer: 20.2

Q3) $3 \times 2 = 6$
 $6 \times 3 = 18$
 $18 \times 4 = 72$
 $72 \times 5 = 360$
 $360 \times 6 = 2160$
Answer: 360

Q4) $6 \times 0.5 = 3$
 $3 \times 1 = 3$
 $3 \times 1.5 = 4.5$
 $4.5 \times 2 = 9$
 $9 \times 2.5 = 22.5$
Answer: 22.5

Q5) $24 + 2^2 = 28$
 $28 + 4^2 = 44$
 $44 + 6^2 = 80$
 $80 + 8^2 = 144$
 $144 + 10^2 = 244$
Answer: 28

Q6) $2 \times 2 = 4$
 $4 \times 3 = 12$
 $12 \times 4 = 48$
 $48 \times 5 = 240$
 $240 \times 6 = 1440$
Answer: 240

Q7) $22 - (2.3 \times 1) = 19.7$
 $19.7 + (2.3 \times 2) = 24.3$
 $24.3 - (2.3 \times 3) = 17.4$
 $17.4 + (2.3 \times 4) = 26.6$
 $26.6 - (2.3 \times 5) = 15.1$
Answer: 26.6

Q8) $5 \times 1 - 1 = 4$

$4 \times 2 - 1 = 7$
 $7 \times 3 - 1 = 20$
 $20 \times 4 - 1 = 79$
 $79 \times 5 - 1 = 394$
Answer: 364

Q9) $32 + 2^2 = 36$
 $36 + 4^2 = 52$
 $52 + 6^2 = 88$
 $88 + 8^2 = 152$
 $152 + 10^2 = 252$
Answer: 36

Q10) $21 + 16 = 37$
 $37 + 3.2 = 40.2$
 $40.2 + (16 \times 3) = 88.2$
 $88.2 + (3.2 \times 2) = 94.6$
 $94.6 + (48 \times 3) = 238.6$
Answer: 238.6

Q11) $(142/2) - 1 = 70$
 $(70/2) - 1 = 34$
 $(34/2) - 1 = 16$
 $(16/2) - 1 = 7$
 $(7/2) - 1 = 2.5$
Answer: 7

Q12) $17 \times 0.5 + 0.5 = 9$
 $9 \times 1 + 1 = 10$
 $10 \times 1.5 + 1.5 = 16.5$
 $16.5 \times 2 + 2 = 35$
 $35 \times 2.5 + 2.5 = 90$
Answer: 90

Q13) The differences are: $2^2 - 1$, $3^2 - 1$, $4^2 - 1$, $5^2 - 1$...
Answer: 76

Q14) $1 + 3 = 4$
 $1 + 3 + 4 = 8$
 $3 + 4 + 8 = 15$
 $4 + 8 + 15 = 27$
 $8 + 15 + 27 = 50$

Answer: 50

Q15) $5760/1^2 = 5760$

$5760/2^2 = 1440$

$1440/3^2 = 160$

$160/4^2 = 10$

$10/5^2 = 0.4$

Answer: 5760

Q16) $8 \times 0.5 + 1 = 5$

$5 \times 1 + 1 = 6$

$6 \times 1.5 + 1 = 10$

$10 \times 2 + 1 = 21$

$21 \times 2.5 + 1 = 53.5$

Answer: 53.5

Q17) $339 + 2^1 = 341$

$341 + 2^2 = 345$

$345 + 2^3 = 353$

$353 + 2^4 = 369$

Answer: 341

Q18) $38 - 25.6/1 = 12.4$

$12.4 + 25.6/2 = 25.2$

$25.2 - 25.6/4 = 18.8$

$18.8 + 25.6/8 = 22$

Answer: 12.4

Q19) $0.5 \times 2 = 1$

$1 \times (2 + 3) = 5$

$5 \times (2 + 3 + 3) = 40$

$40 \times (2 + 3 + 3 + 3) = 440$

$440 \times (2 + 3 + 3 + 3 + 3) = 6160$

Answer: 6160

Q20) $0.1 \times 2 = 0.2$

$0.2 \times (2 + 3) = 1$

$1 \times (2 + 3 + 3) = 8$

$8 \times (2 + 3 + 3 + 3) = 88$

$88 \times (2 + 3 + 3 + 3 + 3) = 1232$

Answer: 1232

Q21) $9 + 22.4 = 31.4$

$$31.4 - 22.4/2 = 20.2$$

$$20.2 + 22.4/4 = 25.8$$

$$25.8 - 22.4/8 = 23$$

$$23 + 22.4/16 = 24.4$$

Answer: 24.4

$$\text{Q22) } 10 \times 0.5 + 1 = 6$$

$$6 \times 1 + 1 = 7$$

$$7 \times 1.5 + 1 = 11.5$$

$$11.5 \times 2 + 1 = 24$$

$$24 \times 2.5 + 1 = 61$$

Answer: 61

$$\text{Q23) } 2880/1^2 = 2880$$

$$2880/2^2 = 720$$

$$720/3^2 = 80$$

$$80/4^2 = 5$$

$$5/5^2 = 0.2$$

Answer: 720

$$\text{Q24) } 259 - 2 = 257$$

$$257 - 2 = 253$$

$$253 - 2 = 245$$

$$245 - 2 = 229$$

$$229 - 2 = 197$$

Answer: 257

$$\text{Q25) } 8 \times 0.5 = 4$$

$$4 \times 1 = 4$$

$$4 \times 1.5 = 6$$

$$6 \times 2 = 12$$

$$12 \times 2.5 = 30$$

So the wrong term is 32

$$\text{Q26) } x^2+2, x^3-3, x^4+4...$$

Answer: 5496

$$\text{Q27) } +9+18+36+72+$$

Answer= 146

$$\text{Q28) Difference } (6+17+27+36+44..)$$

$$6+11=17$$

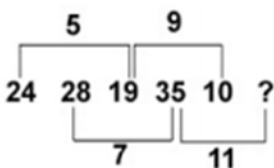
$$17+10=27$$

$$27+9=36$$

$$36+8=44$$

$$\text{Answer} = 145$$

Q29)



Answer: 46

Q30) $x1-8, x2-8, x3-8, x4-8 \dots$

Answer: 32



Govt Exams ? Crack with Us...

Wrong Number Series

1). 50 51 47 56 42 65 29

- a. 51
- b. 47
- c. 56
- d. 42
- e. 65

2). 3 9 23 99 479 2881 20159

- a. 9
- b. 23
- c. 99
- d. 479
- e. 2881

3). 7 4 6 9 20 52.5 160.5

- a. 6
- b. 4
- c. 20
- d. 9
- e. 52.5

4). 1 3 6 11 20 39 70

- a. 3
- b. 39
- c. 11
- d. 20
- e. 6

5). 2 13 27 113 561 3369 23581

- a. 27
- b. 13
- c. 113
- d. 561
- e. 3369

6). 7 16 27 40 46

- a. 7
- b. 16
- c. 27
- d. 40
- e. 46

7). 729 1331 2497 3375 4913

- a. 729
- b. 1331
- c. 3375
- d. 2497
- e. 4913

8). 80 119 166 221 223

- a. 80
- b. 119
- c. 166
- d. 192
- e. 223

9). 8 8.5 11.5 14 17

- a. 8
- b. 8.5
- c. 11.5
- d. 14
- e. 17

10). 439 778 1456 2812 5624

- a. 439
- b. 778
- c. 1456
- d. 2812
- e. 5624

11). 17, 36, 132, 635, 3500, 21750, 153762

- a. 635
- b. 17
- c. 132
- d. 3500
- e. 36

12). 17, 20, 46, 147, 599, 3015, 18018

- a. 20
- b. 46
- c. 599
- d. 147
- e. 3015

13). 90, 135, 286, 750, 2160, 6405, 19155

- a. 90
- b. 750
- c. 6405
- d. 286
- e. 2160

14). 9, 14, 40, 129, 536, 2705, 16260

- a. 14
- b. 40
- c. 536
- d. 9
- e. 129

15). 8, 18, 64, 272, 1395, 8424, 59045

- a. 18
- b. 8
- c. 272
- d. 1395
- e. 64

16). 32, 39, 65, 128, 253, 467, 809, 1320

- a. 39
- b. 65
- c. 253
- d. 467
- e. 32

17). 38, 49, 62, 72, 77, 91, 101

- a. 49
- b. 72
- c. 77
- d. 91
- e. 38

18). 19, 22, 32, 46, 73, 108, 158

- a. 22
- b. 46

- c. 73
- d. 19
- e. 158

19). 47, 44, 45, 46, 33, 57, 3, 88

- a. 44
- b. 57
- c. 46
- d. 3
- e. 47

20). 45, 131, 228, 338, 466, 619, 800

- a. 131
- b. 466
- c. 619
- d. 45
- e. 800

Solution

1). The series is $50 + 1^2 = 51$, $51 - 2^2 = 47$, $47 + 3^2 = 56$, $56 - 4^2 = 40$, $40 + 5^2 = 65$, $65 - 6^2 = 29$.

Hence, there should be 40 in place of 42.

Answer is: D

2). The series is $3 \times 2 + 3 = 9$, $9 \times 3 - 4 = 23$, $23 \times 4 + 5 = 97$, $97 \times 5 - 6 = 479$, $479 \times 6 + 7 = 2881$,

$2881 \times 7 - 8 = 20159$

Hence, there should be 97 in place of 99.

Answer is: C

3). The series is $x0.5 + 0.5$, $x1 + 1$, $x1.5 + 1.5$, $x2 + 2$, $x2.5 + 2.5$, $x3 + 3...$

Hence, there should be 5 in place of 6.

Answer is: A

4). The series is $1 \times 2 + 1 = 3$, $3 \times 2 + 0 = 6$, $6 \times 2 - 1 = 11$, $11 \times 2 - 2 = 20$, $20 \times 2 - 3 = 37$, $37 \times 2 - 4 =$

70.

Hence, there should be 37 in place of 39.

Answer is: B

5). The series is $2 \times 2 + 7 = 11$, $11 \times 3 - 6 = 27$, $27 \times 4 + 5 = 113$, $113 \times 5 - 4 = 561$, $561 \times 6 + 3 = 3369$, $3369 \times 7 - 2 = 23581$.

Hence, there should be 11 in place of 13.

Answer is: B

6). The series is $5 \times 1 + 2 = 7$, $6 \times 2 + 4 = 16$, $7 \times 3 + 6 = 27$, $8 \times 4 + 8 = 40$, $9 \times 5 + 10 = 55$.

Hence, there should be 55 in place of 46.

Alternate Method: +9, +11, +13, +15

Answer is: E

7). The series is 9^3 , 11^3 , 13^3 , 15^3 , 17^3 ,

Hence, there should be 2197 in place of 2497.

Answer is: D

8). The series is $9^2 - 1$, $11^2 - 2$, $13^2 - 3$, $15^2 - 4$, $17^2 - 5$,

Hence, there should be 284 in place of 223.

Answer is: E

9). The series is $8 + 1.5 = 9.5$, $9.5 + 2 = 11.5$, $11.5 + 2.5 = 14$, $14 + 3 = 17$

Hence, there should be 9.5 in place of 8.5.

Answer is: B

10). The series is +339, +678, +1356, +2712,

Hence, there should be 5524 in place of 5624.

Answer is: E

11). The number series should be 636 in the place of 635.

The series is $(17 + 1^3) \times 2$, $(36 + 2^3) \times 3$, $(132 + 3^3) \times 4$, $(636 + 4^3) \times 5$

Answer is: a)

12). The number series should be 600 in the place of 599.

The series is $\times 1 + 3$, $\times 2 + 6$, $\times 3 + 9$, $\times 4 + 12$, $\times 5 + 15$

Answer is: c)

13). The number series should be 285 in the place of 286.

The series is $(90-45) \times 3$, $(135-40) \times 3$, $(285-35) \times 3$, $(750-30) \times 3$, $(2160-25) \times 3$,...

Answer is: d)

14). The number series should be 38 in the place of 40.

The series is $\times 1 + 5$, $\times 2 + 10$, $\times 3 + 15$, $\times 4 + 20$, $\times 5 + 25$

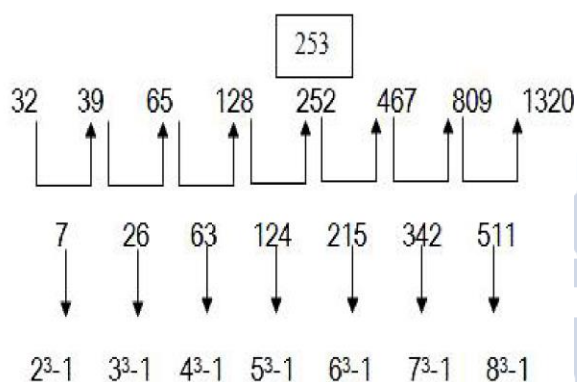
Answer is: b)

15). The number series should be 63 in the place of 64.

The series is $(8+1) \times 2$, $(18+3) \times 3$, $(63+5) \times 4$, $(272+7) \times 5$

Answer is: e)

16). The series is...



Hence, 253 is a wrong number.

Answer: C

17). The series is,

$$38 = 3 + 8 = 11 = 38 + 11 = 49$$

$$49 = 4 + 9 = 13 = 49 + 13 = 62$$

$$62 = 6 + 2 = 8 = 62 + 8 = 70 \neq 72$$

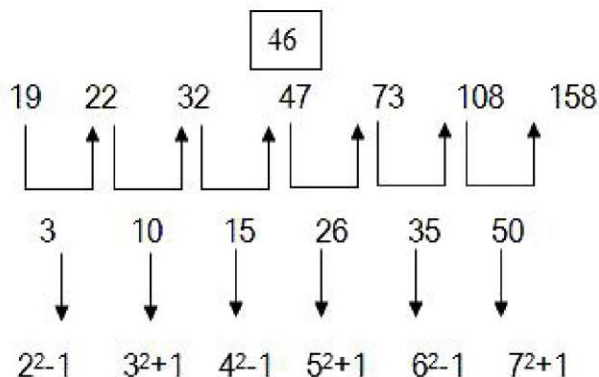
$$70 = 7 + 0 = 7 = 70 + 7 = 77$$

$$77 = 7 + 7 = 14 = 77 + 14 = 91$$

$$91 = 9 + 1 = 10 = 91 + 10 = 101$$

Hence, 72 is the wrong number.

18) The series,



Hence, 46 is the wrong number

Answer: B

19). First series 47, 45, 33, 3

$$47 - (1 \times 2) = 45$$

$$45 - (3 \times 4) = 33$$

$$33 - (5 \times 6) = 3$$

Second series 44, 46, 57, 88

$$44 + (1 \times 2) = 46$$

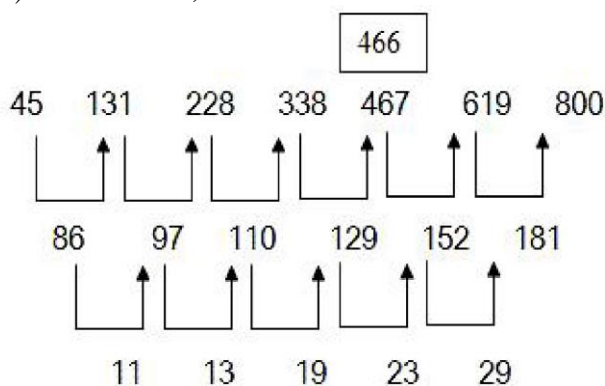
$$46 + (3 \times 4) = 58 \neq 57$$

$$58 + (5 \times 6) = 88$$

Hence, 57 is the wrong answer.

Answer: B

20). The series is,



11, 13, 19, 23 and 29 are the prime numbers

Hence, 466 is the wrong number.

Answer: B

Wrong Number Series

1). 1, 8, 66, 460, 2758, 13785, 55146

- a. 460
- b. 2758
- c. 66
- d. 8
- e. 55146

2). 56, 57, 48, 73, 24, 105, -10

- a. 57
- b. 73
- c. 105
- d. -10
- e. 24

3). 2, 2, 13, 59, 363, 2519, 20161

- a. 13
- b. 20161
- c. 2519
- d. 59
- e. 363

4). 3, 1, 3, 0.7, 3, 0.6, 3, 0.5, 3

- a. 1
- b. 0.7
- c. 0.6
- d. 3
- e. 0.5

5). 2, 6, 13, 26, 54, 100, 197

- a. 26
- b. 100
- c. 54
- d. 197
- e. 13

6). 3, 7.5, 15, 37.5, 75, 167.5, 375

- a. 167.5
- b. 75
- c. 37.5
- d. 15
- e. 7.5

7). 0, 1, 9, 36, 99, 225, 441

- a. 9
- b. 36

- c. 99
- d. 225
- e. 441

8). 2, 3, 5, 8, 14, 23, 41, 69

- a. 5
- b. 8
- c. 14
- d. 41
- e. 69

9). 5, 10, 17, 27, 37, 50, 65

- a. 10
- b. 17
- c. 37
- d. 27
- e. 50

10). 108, 54, 36, 18, 9, 6, 4

- a. 54
- b. 36
- c. 18
- d. 9
- e. 6

11). 4, 12, 42, 196, 1005, 6066, 42511

- a. 12
- b. 42
- c. 196
- d. 1005
- e. 6066

12). 7, 13, 25, 49, 97, 194, 385

- a. 13
- b. 25
- c. 49
- d. 194
- e. 385

13). 10, 15, 24, 35, 54, 75, 100

- a. 10
- b. 24
- c. 35
- d. 54

e. 100

14). 2, 8, 32, 148, 765, 4626, 32431

a. 32431

b. 765

c. 148

d. 32

e. 2

15). 73, 57, 49, 44, 43, 42

a. 73

b. 57

c. 49

d. 44

e. 42

16). 1527, 1185, 985, 865, 823, 817

a. 985

b. 865

c. 823

d. 817

e. 1185

17). 110, 106, 204, 608, 2384, 11900

a. 2384

b. 106

c. 11900

d. 608

e. 204

18). 71, 90, 128, 185, 261, 365

a. 365

b. 128

c. 185

d. 90

e. 261

19). 8, 17.5, 64.75, 157.375, 561.3125, 1400.78125

a. 17.5

b. 64.75

c. 157.375

d. 561.3125

e. 1400.78125

20). 18, 36, 144, 864, 6912, 691020

- a. 691020
- b. 144
- c. 864
- d. 6912
- e. 36

21). 76, 75, 142, 399, 1530, 7535

- a. 399
- b. 142
- c. 75
- d. 1530
- e. 7535

22). 84, 138, 192, 270, 348, 434

- a. 192
- b. 138
- c. 84
- d. 348
- e. 434

23). 88, 88, 176, 530, 2112, 10560

- a. 88
- b. 176
- c. 2112
- d. 10560
- e. 530

24). 2400, 1295, 625, 255, 80, 15

- a. 2400
- b. 1295
- c. 625
- d. 80
- e. 15

25). 45, 62, 81, 102, 123, 150

- a. 45
- b. 62
- c. 102
- d. 81
- e. 123

26). 127 470 686 811 875 885

- a. 470
- b. 686
- c. 811
- d. 885
- e. 875

27). 1296 652 328 169 88.5 48.25

- a. 328
- b. 169
- c. 88.5
- d. 1296
- e. 652

28). 2 5 15 131 530 13257

- a. 5
- b. 15
- c. 131
- d. 530
- e. 13257

29). 508 640 776 925 1092 1283

- a. 640
- b. 508
- c. 925
- d. 1092
- e. 1283

30). 1325 714 318 90 -18 -54

- a. 714
- b. 318
- c. 90
- d. -18
- e. 1325

Solution

1). 1 8 66 460 2758 13785 55146

Here $1 \times 9 - 1 = 8$; $8 \times 8 + 2 = 66$; $66 \times 7 - 3 = 459$;

$459 \times 6 + 4 = 2758$; $2758 \times 5 - 5 = 13785$; $13785 \times 4 + 6 = 55146$

Answer: a)

2). 56 57 48 73 24 105 -10

Here $56 + 1^2 = 57$;

$57 - 3^2 = 48$; $48 + 5^2 = 73$; $73 - 7^2 = 24$; $24 + 9^2 = 105$; $105 - 11^2 = -16$

Answer: d)

3). 2 2 13 59 363 2519 20161

Here $2 \times 3 - 4 = 2$; $2 \times 4 + 5 = 13$;

$13 \times 5 - 6 = 59$; $59 \times 6 + 7 = 361$; $361 \times 7 - 8 = 2519$; $2519 \times 8 + 9 = 20161$

Answer: e)

4). 3 1 3 0.7 3 0.6 3

$3 \times 1/3 = 1$;

$1 \times 3 = 3$;

$3 \times 1/4 = 0.75$;

$0.75 \times 4 = 3$;

$3 \times 1/5 = 0.6$;

$0.6 \times 5 = 3$;

$3 \times 1/6 = 0.5$;

$0.5 \times 6 = 3$.

Answer: b)

5). 2 6 13 26 54 100 197

Here $2 \times 2 + 2 = 6$; $6 \times 2 + 1 = 13$;

$13 \times 2 + 0 = 26$; $26 \times 2 - 1 = 51$;

$51 \times 2 - 2 = 100$; $100 \times 2 - 3 = 197$

Answer: c)

6). The series is $\times 2.5$, $\times 2$ alternately

Answer: a)

7). The differences are

0 1 9 36 99 225 441

0^2 1^2 3^2 6^2 10^2 15^2 21^2

Answer: c)

8). The series is an alternate series, having

$S_1 = 2$ 5 14 41; $\times 3 - 1$ in each term

$S_2 = 3$ 8 23 69; $\times 3 - 1$ in each term

Answer: e)

9). The series is $+5$, $+7$, $+9$, $+11$,

Answer: d)

10). The series is $\div 2, \div 1.5$ alternately.

Answer: d)

11). b)

4, 12, 42, 196, 1005, 6066, 42511

$$4 \times 2 + (2)^2 = 12$$

$$12 \times 3 + (3)^2 = 45$$

$$45 \times 4 + (4)^2 = 196$$

$$196 \times 5 + (5)^2 = 1005$$

$$1005 \times 6 + (6)^2 = 6066$$

$$6066 \times 7 + (7)^2 = 42511$$

Hence, 42 is the wrong number

12). d)

7, 13, 25, 49, 97, 194, 385

$$7 \times 2 - 1 = 13$$

$$13 \times 2 - 1 = 25$$

$$25 \times 2 - 1 = 49$$

$$49 \times 2 - 1 = 97$$

$$97 \times 2 - 1 = 193$$

$$193 \times 2 - 1 = 385$$

Hence, 194 is the wrong number

13). c)

10, 15, 24, 35, 54, 75, 100

Hence, 35 is the wrong number

14). d)

2, 8, 32, 148, 765, 4626, 32431

$$2 \times 2 + 2^2 = 8$$

$$8 \times 3 + 3^2 = 33$$

$$33 \times 4 + 4^2 = 148$$

$$148 \times 5 + 5^2 = 765$$

$$765 \times 6 + 6^2 = 4626$$

$$4626 \times 7 + 7^2 = 32431$$

Hence, 32 is the wrong number.

15). d)

73, 57, 49, 44, 43, 42

$$73 - 57 = 16$$

$$57 - 49 = 8$$

$$49-45=4$$

$$45-43=2$$

$$43-42=1$$

Differences between the consecutive numbers are in Geometric Progression (G.P)

Hence, 44 is the wrong number.

16). A) The series is

$$1527 - (19^2 - 19) = 1185,$$

$$1185 - (15^2 - 15) = 975,$$

$$975 - (11^2 - 11) = 865,$$

$$865 - (7^2 - 7) = 823,$$

$$823 - (3^2 - 3) = 817$$

There should be 975 in place of 985.

17). D) The series is $110 \times 1 - 4 = 106,$

$$106 \times 2 - 8 = 204, 204 \times 3 - 12 = 600, 600 \times 4 - 16 = 2384, 2384 \times 5 - 20 = 11900$$

There should be 600 in place of 608.

18). A) The series is

$$71 + 19 = 90, 90 + 38 = 128, 128 + 57 = 185, 185 + 76 = 261, 261 + 95 = 356$$

Hence there should be 356 in place of 365.

19). C) The series is

$$8 \times 2.5 - 2.5 = 17.5,$$

$$17.5 \times 3.5 + 3.5 = 64.75,$$

$$64.75 \times 2.5 - 2.5 = 159.375,$$

$$159.375 \times 3.5 + 3.5 = 561.3125,$$

$$561.3125 \times 2.5 - 2.5 = 1400.78125, \dots$$

Hence there should be 159.375 in place of 157.375.

20). A) The series is...

	$\times 2$		$\times 4$		$\times 6$		$\times 8$		$\times 10$
18	36	144	864	6912	69120				

Hence there should be 69120 in place of 691020.

21). D) The series is

$$76 \times 1 - 1^3 = 75,$$

$$75 \times 2 - 2^3 = 142,$$

$$142 \times 3 - 3^3 = 399,$$

$$399 \times 4 - 4^3 = 1532,$$

$$1532 \times 5 - 5^3 = 7535, \dots$$

Hence there should be 1532 in place of 1530.

22). A) The series is

$$21 \times 4 = 84,$$

$$23 \times 6 = 138,$$

$$25 \times 8 = 200,$$

$$27 \times 10 = 270,$$

$$29 \times 12 = 348,$$

$$31 \times 14 = 434, \dots$$

Hence there should be 200 in place, of 192.

Therefore the wrong number is 192.

23). E) The series is

$\times 1$	$\times 2$	$\times 3$	$\times 4$	$\times 5$
88	88	176	528	2112
				10560

Hence there should be 528 in place of 530.

Therefore the wrong number is 530.

24). C) The series is $7^4 - 1 = 2400,$

$$6^4 - 1 = 1295, 5^4 - 1 = 624, 4^4 - 1 = 255, 3^4 - 1 = 80, 2^4 - 1 = 15, \dots$$

Hence there should be 624 in place of 625.

Therefore, the wrong number is 625.

25). E) The series is

$+17$	$+19$	$+21$	$+23$	$+25$
45	62	81	102	125
				150

Hence there should be 125 in place of 123.

Therefore the wrong number is 123.

26). The series is $+7^3, +6^3, +5^3, +4^3, +3^3, +2^3, \dots$

$$\text{The series is } 127 + 343 = 470, 470 + 216 = 686, 686 + 125 = 811, 811 + 64 = 875, 875 + 27 = 902,$$

Therefore it should be 902 in place of 885.

Answer: d)

27). The series is $\div 2 + 4$ (repeated)

$$1296 \div 2 + 4 = 652, 652 \div 2 + 4 = 330, 330 \div 2 + 4 = 169, 169 \div 2 + 4 = 88.5, 88.5 \div 2 + 4 = 48.75, \dots$$

Therefore it should be 330 in place of 328.

Answer: a)

28). The series is $2 \times 12 + 3 = 5$, $5 \times 2 + 4 = 14$, $14 \times 32 + 5 = 131$, $131 \times 4 + 6 = 530$, $530 \times 52 + 7 =$

13257,.....

Therefore it should be 14 in place of 15.

Answer: b)

29). The series is $508 + 131 = 639$, $639 + 137 = 776$, $776 + 149 = 925$, $925 + 167 = 1092$, $1092 + 191 =$

1283, ...

Hence it 'should be 639 in place of 640.

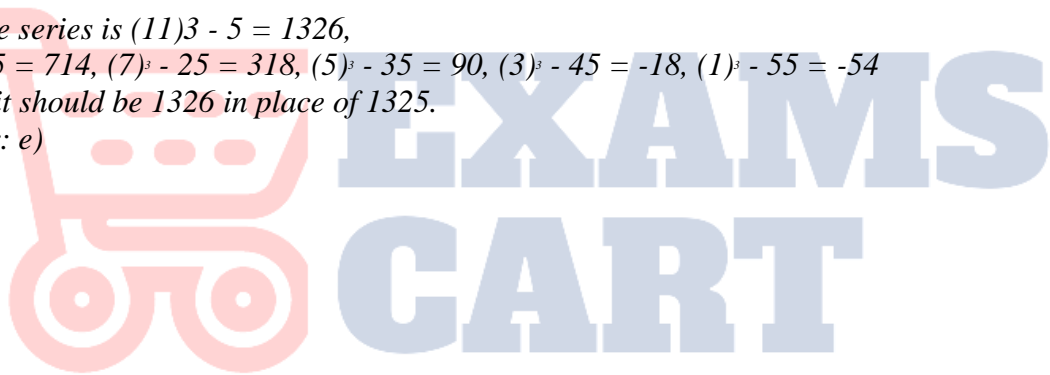
Answer: a)

30). The series is $(11)^3 - 5 = 1326$,

$(9)^3 - 15 = 714$, $(7)^3 - 25 = 318$, $(5)^3 - 35 = 90$, $(3)^3 - 45 = -18$, $(1)^3 - 55 = -54$

Hence it should be 1326 in place of 1325.

Answer: e)



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