

Series

Introduction: In series, words, letters or digits are given in a specific sequence/ order and you are asked to find out the next word, letter or digit to complete the given series. Numbers or alphabetical letters are generally called as terms of the series. These terms follow a certain pattern throughout.

Numbers Series

In the number series, some numbers are arranged in a particular sequence. All the , numbers form a series and change in a certain order.

The number itself may be

- Perfect Square

Eg: 4,9,16,25,36,.....

Ans: 49

- Perfect Cube

Eg: 1,8,27,64,125,.....

Ans: 216

- Prime

Eg: 1,2,3,5,7,.....

Ans: 11

- Combination

Eg: 2,5,10,17,26,.....

Ans: 37

Alphabet Series

Another type of number series question which appears in these tests involves the substitution of letters of the alphabet for numbers. For example A=1, B=2 etc. It may seem strange to consider these as number series questions but they do actually work in exactly the same way once you have changed them back into numbers.

Eg: 1.B,E,H,K,.....

Ans: N

2.A,Z,B,Y,.....

Ans: C

3.T,V,X,Z,....

Ans: B

Exercise Questions

1) DEF, DEF₂, DE₂F₂, _____, D₂E₂F₃

- a) DEF₃
- b) D₃E₃F₃
- c) D₂E₃F
- d) D₂E₂F₂

Answer: Option d

Explanation: In this series, the letters remain the same: DEF. The subscript numbers follow this series:

111, 112, 122, 222, 223, 233, 333, ...

2) DKY FJW HIU JHS ---

- a) KGR
- b) LFQ
- c) KFR
- d) LGQ

Answer:d

Explanation : 1st letter = +2 (D+ 2 = F)

2nd letter = -1 (K -1 = J)

3rd letter = -2 (Y-2 = W)

3) 101 131 374 383 313 727

- a)383
- b)374
- c)101
- d)727

Answer: b

Explanation : 374 (palindrome)

4) 380, 188, 92, 48, 20, 8, 2

- a) 188
- b) 92
- c) 48
- d) 20

Answer: c

Explanation : Wrong no. = 48, Correct no. = 44
Each term will be four more than two times the next term

5) 8 12 21 30 46 _____

- a)54
- b)62
- c)50
- d)34

Answer: b

Explanation: $2*2+4=4+4=8$, $2*2+8=4+8=12$, $3*3+12=9+12=21$, $3*3+21=9+21=30$,
 $4*4+30=16+30=46$, $4*4+46=16+46=62$

6) 19 23 29 31 37 41 _____

- a)43
- b)47
- c)53
- d)51

Answer: a

Explanation : Numbers are all primes. The next prime is 43.

Exercise Questions

1. 4, 3, 4, 9, 32

- a. 125
- b. 135
- c. 145
- d. 155

2. 16 (81) 25 49 (169) 36 64 (?) 4

- a. 121

b. 84

c. 81

d. 100

3. 1.5, 3, 5.5, 9, 13.5, 19, ...

a. 81

b. 15.5

c. 21.5

d. 25.5

4. Which term of the series 5,8,11,14,.....is 320?

a. 104th

b. 105th

c. 106th

d. 64th

5. In the series 5, 10, 20, 40,....what will be the 10th term?

a. 1280

b. 2560

c. 1820

d. 2650

6. QPO, SRQ, UTS, WVU, ?

- a. XVZ
- b. ZYA
- c. YXW
- d. VWX

7. deb ijg nol ? xyv

- a. rsp
- b. stp
- c. rsq
- d. stq
- e. sto

8. AB, DEF, HIJK, ? , STUVWX

- a. MNOPQ
- b. LMNOP
- c. LMNO
- d. QRSTU

9. shg rif qje ? olc

- a. ole
- b. pkd
- c. nmc
- d. nlb

10. Find the wrong term in the letter-number series given below:

G4T, J10R, M20P, P43N, S90L

- a. G4T
- b. J10R
- c. M20P
- d. P43N
- e. S90L

Answer & Explanations

1. The numbers are $(x*1)-1$; $(x2)-2$; $(x3)-3$

Hence the series would be $(32*5)-5=155$

2. The pattern is 8^2 (?) 2^2 ; $? = 8+2=10^2 = 100$

3. The pattern is get by adding 1.5, 2.5, 3.5

Then, $19+6.5 = 25.5$

4. Clearly, $5+3= 8$, $8+3= 11$, $11+3= 14$,....

So this is an A.P series in which $a=5$, $d=3$.

Let the number of the terms be n

Then, $320= 5+(n-1)*3$; $3n=318$; $n=106$

5. This is an G.P series in which $a= 5$; $r= 2$

10^{th} term= $ar^{(n-1)} = 5*2^{(10-1)} = 5*2^9 = 2560$

6. Each term in the series consists of three consecutive letters in reverse order. The first letter of each term and last letter of next term is the same.
7. The letters in each term are moved five steps forward to obtain the corresponding letters of next term.
8. The number of letters in the terms goes on increasing by one at each step. Each term consists of letters in alphabetic order. The last letter of each term and first letter of next term are alternate.
9. The first and third letters of each term are moved one step backward and the second letter is moved one step forward to obtain the corresponding letters of the next term.
10. The first letter of each term is moved three steps forward and the last letter is moved two steps backward to obtain the corresponding letters of the next term. The numbers follow the sequence $*2+1$, $*2+2$, $*2+3$, $*2+4$.

So, 10 is wrong and must be replaced by $(4*2+1) = 9$.