

Missing Numbers

Missing Number

We have seen that a number series is a group of numbers following a certain rule in a series form.

But in the missing number you have to detect a particular rule within the numbers which are in the pictorial format.

Some common types of relationships which are asked in the exam –

1. Number based
2. Letter based
3. Mix (Letter+Number)

Below we are going to share the types of series with examples to explain it.

1. In the following question, select the missing number from the given alternatives.

8	7	6
5	6	7
3	2	?
120	84	252

- a. 8
- b. 6
- c. 5
- d. 7

Ans. 6

Solution –

From the first column,

$$8 \times 5 \times 3 = 120$$

From the second column,

$$7 \times 6 \times 2 = 84$$

Similarly from the third column,

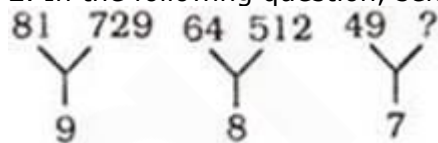
$$6 \times 7 \times ? = 252$$

$$? = 252 \div 42$$

$$? = 6$$

Hence, the correct answer is option B.

2. In the following question, select the missing number from the given alternatives.



- a. 444
- b. 515
- c. 343
- d. 373

Ans. C

Solution –

From the first figure

$$9 \times 9 = 81$$

$$81 \times 9 = 729$$

From the second figure

$$8 \times 8 = 64$$

$$64 \times 8 = 512$$

From the third figure

$$7 \times 7 = 49$$

$$49 \times 7 = 343$$

Hence, option C is the correct response.

3. In the following question, select the missing number from the given alternatives.



- a. 12
- b. 19
- c. 28
- d. 9

Ans. D

Solution -

The pattern is,

$$3^2 + 1 = 9 + 1 = 10$$

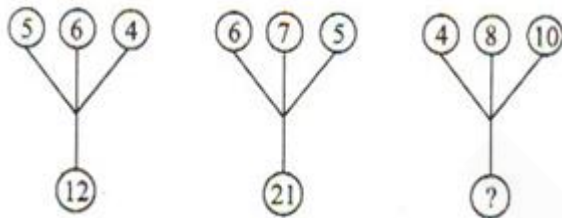
$$5^2 + 1 = 25 + 1 = 26$$

$$7^2 + 1 = 49 + 1 = 50$$

$$9^2 + 1 = 81 + 1 = 82$$

Hence, D is correct.

4. In the following question, select the missing number from the given alternatives.



- a. 12
- b. 22
- c. 32
- d. 34

Ans. C

Solution -

It is clear from the figure that,

From first figure,

$$(5 \times 6 \times 4) / 10 = 12$$

From second figure,

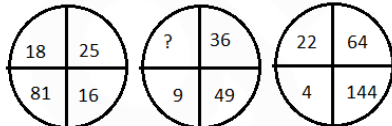
$$(6 \times 7 \times 5) / 10 = 21$$

Similarly, from third figure

$$(4 \times 8 \times 10) / 10 = 32$$

Hence, option C is the correct response.

5. In the following question, select the missing number from the given alternatives.



- a. 16
- b. 61
- c. 81
- d. 15

Ans. A

Solution -

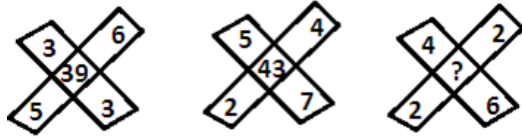
$$\sqrt{25} + \sqrt{16} + \sqrt{81} = 18$$

$$\sqrt{64} + \sqrt{144} + \sqrt{4} = 22$$

$$\text{similarly, } \sqrt{36} + \sqrt{49} + \sqrt{9} = 16$$

Hence, option A is the correct response.

6. In the following question, select the missing number from the given alternatives.



- a. 28
- b. 24
- c. 36
- d. 34

Ans. A

Solution –

$$3 \times 3 + 5 \times 6 = 9 + 30 = 39$$

$$5 \times 7 + 2 \times 4 = 35 + 8 = 43$$

$$\text{Therefore, } 2 \times 2 + 4 \times 6 = 4 + 24 = 28$$

Hence, option A is correct.

7. In the following question, select the missing number from the given alternatives.

1	4	5	8	6	9
10	7	14	11	?	12

- a. 13
- b. 14
- c. 15
- d. 16

Ans. C

Solution –

Here,

$$\text{In 1}^{\text{st}} \text{ matrix: } 7 + 4 - 1 = 10$$

$$\text{In 2}^{\text{nd}} \text{ matrix: } 11 + 8 - 5 = 14$$

Similarly,

$$\text{In 3}^{\text{rd}} \text{ matrix: } 12 + 9 - 6 = 15$$

Thus the missing number is 15.

8. In the following question, select the missing term from the given alternatives.

A1	C2	E3
G4	I5	?
M5	O7	Q12

- a. K8
- b. J15
- c. K9
- d. L10

Ans. C

Solution –

From the row first, it is clear that the third number is the sum of the first two numbers and in case of letter, there is a gap of one letter between them.

The same sequence followed in row 3 as well

Hence, according to this pattern, the missing part is K9.

So, the correct option is (C)

9. In the following question, select the missing letter from the given series.

B	A	B
C	C	D
Y	P	?

- a. E
- b. D
- c. J
- d. H

Ans. C

Solution –

There are 26 alphabets in English, and if we assign numbers to every alphabet starting from 'A', 'B', 'C' etc., it will appear to be:

A=1, B=2, C=3, D=4..... likewise, till Z=26

Elements in 3rd row is square of the sum of respective elements of 1st and 2nd row i.e.

$$\bullet Y(25) = (B(2) + C(3))^2 \Rightarrow 25 = 5^2$$

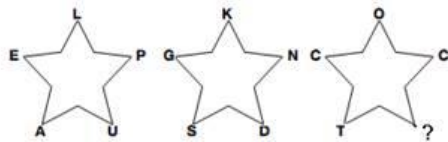
$$\bullet P(16) = (A(1) + C(3))^2 \Rightarrow 16 = 4^2$$

$$\bullet (B(2) + D(4))^2 \Rightarrow 6^2 = 36 \text{ and since '36' is greater than 26, we will subtract '26' from '36'.$$

Therefore, the missing term is: $36 - 26 = 10$ ('J')

Hence, the correct option is C.

10. In the following question, select the missing number from the given alternatives.



- a. L
- b. D
- c. K
- d. N

Ans. D

Solution –

The sum of the numerical value of the letters around each star is always 55.

1st Figure

$$\Rightarrow L + P + U + A + E$$

$$\Rightarrow 12 + 16 + 21 + 1 + 5 = 55$$

2nd Figure

$$\Rightarrow K + N + D + S + G$$

$$\Rightarrow 11 + 14 + 4 + 19 + 7 = 55$$

Similarly in 3rd Figure,

$$\Rightarrow O + C + ? + T + C = 55$$

$$\Rightarrow 15 + 3 + ? + 20 + 3 = 55$$

$$\Rightarrow ? + 41 = 55$$

$$\Rightarrow ? = 14$$

Hence, N is the required answer.