CAREERS 360

PREPARATION Series

Missing Number

All Questions with Solutions

Q. 1 **Directions:** In the following question, select the missing number from the given responses.

7	9	8
2	4	3
5	7	6
16	32	?

Option 1:
17

Option 2:
24

Option 3:
47

Option 4:
73

Correct Answer:
24

Solution:
Given:

7	9	8
2	4	3
5	7	6

16	32	?

The pattern can be seen running horizontally along the rows.

Row 1: 7 + 9 = 16→16 ÷ 2 = 8

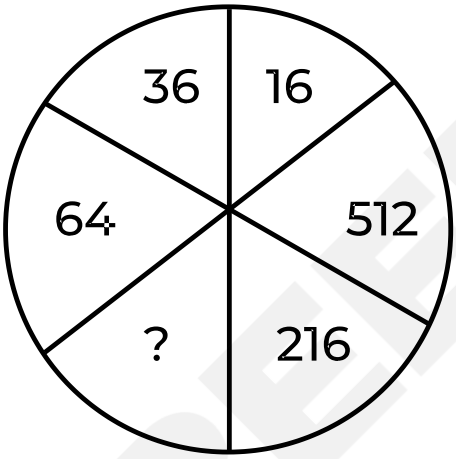
Row 2: 2 + 4 = 6→6 ÷ 2 = 3

Row 3: 5 + 7 = 12→12 ÷ 2 = 6

Row 4: 16 + 32 = 48→48 ÷ 2 = 24

So, the missing number is 24. Hence, the **second option** is correct.

Q. 2 **Directions:** Find the missing number from the given responses.



Option 1:
128

Option 2:
64

Option 3:
72

Option 4:
108

Correct Answer:
64

Solution:
On moving in the anticlockwise direction, (starting from 16), the first three numbers are the squares of 4, 6, and 8, and the next three are the cubes of 4, 6, and 8.
$(4)^2 = 16$; $(6)^2 = 36$; $(8)^2 = 64$; $(4)^3 = 64$; $(6)^3 = 216$; $(8)^3 = 512$

So, 64 is the missing number. Hence, the **second option** is correct.

Q. 3 **Directions:** Find the missing number from the given responses.

81	625	2401
3	5	7
27	125	?
105	745	2737

Option 1:
287

Option 2:
336

Option 3:
385

Option 4:
343

Correct Answer:
343

Solution:
Here, add the first and the third numbers and subtract the second number from the sum to obtain the fourth number.

In the first column; 81 + 27 – 3 = 105
In the second column; 625 + 125 – 5 = 745
In the third column; 2401 + X – 7 = 2737 ⇒ X = 343

So, the missing number is 343. Hence, the **fourth option** is correct.

Q. 4 **Directions:** Select the missing number from the given responses.

9	8	5
6	6	7
2	?	7
3	6	5

Option 1:
9

Option 2:
4

Option 3:
6

Option 4:
8

Correct Answer:
6

Solution:
Given:

9	8	5
6	6	7
2	?	7
3	6	5

The pattern can be observed running vertically down in the columns.
Column 1: (9 – 3) = 6; 6 + 6 + 2 = 14
Column 2: (8 – 6) = 2; 2 + 6 + (?) = 14
⇒ 8 + (?) = 14
⇒ (?) = 14 – 8
⇒ (?) = 6
Column 3: (5 – 5) = 0; 0 + 7 + 7 = 14

So, 6 is the missing number. Hence, the **third option** is correct.

Q. 5 **Directions:** Select the missing number from the given responses.

14	26	17
2	2	?
3	6	5
4	4	3

Option 1:
1

Option 2:
6

Option 3:
4

Option 4:
2

Correct Answer:
2

Solution:
Given:

14	26	17
2	2	?
3	6	5

4	4	3

The pattern is running down vertically in the columns.

Column 1: (4 × 3) + 2 = 12 + 2 = 14

Column 2: (4 × 6) + 2 = 24 + 2 = 26

Column 3: (3 × 5) + (?) = 17

⇒ 15 + (?) = 17

⇒ (?) = 17 – 15

= 2

So, 2 is the missing number. Hence, the **fourth option** is correct.

Q. 6 **Directions:** Select the missing number in the pattern from the given responses.

1	3	28
3	7	58
2	5	133
4	9	?

Option 1:
97

Option 2:
88

Option 3:
91

Option 4:
106

Correct Answer:
97

Solution:
Given:

1	3	28
3	7	58
2	5	133
4	9	?

The pattern is running horizontally along the rows. Each alternate row follows the same pattern.
Row 1: $(1)^3 + (3)^3 = 1 + 27 = 28$
Row 2: $(3)^2 + (7)^2 = 9 + 49 = 58$
Row 3: $(2)^3 + (5)^3 = 8 + 125 = 133$
Row 4: $(4)^2 + (9)^2 = 16 + 81 = 97$

So, 97 is the required answer. Hence, the **first option** is correct.

Q. 7 **Directions:** In the following question, select the missing number from the given responses.

25	36	64
81	9	4
16	49	100
18	?	20

Option 1:
14

Option 2:
22

Option 3:
16

Option 4:
19

Correct Answer:
16

Solution:
Given:

25	36	64
81	9	4
16	49	100
18	?	20

The pattern can be observed running vertically down the columns.
Column 1: (√25) + (√81) + (√16) = 5 + 9 + 4 = 18
Column 2: (√36) + (√9) + (√49) = 6 + 3 + 7 = 16
Column 3: (√64) + (√4) + (√100) = 8 + 2 + 10 = 20

So, 16 is the missing number. Hence, the **third option** is correct.

Q. 8 **Directions:** In the following question, select the missing number from the given responses.

6	5	3	10
2	8	?	4
4	6	3	8
5	9	15	3

Option 1:
7

Option 2:
6

Option 3:
4

Option 4:
5

Correct Answer:
4

Solution:
Given:

6	5	3	10
2	8	?	4
4	6	3	8

5	9	15	3

The pattern can be observed running horizontally along the rows.

Row 1: (6 × 5) ÷ 3 = 30 ÷ 3 = 10

Row 2: (2 × 8) ÷ (?) = 4

⇒ 16 ÷ (?) = 4

⇒ (?) = 16 ÷ 4

⇒ (?) = 4

Row 3: (4 × 6) ÷ 3 = 24 ÷ 3 = 8

Row 4: (5 × 9) ÷ 15 = 45 ÷ 15 = 3

So, 4 is the missing number. Hence, the **third option** is correct.

Q. 9 **Directions:** In the following question, select the missing number from the given responses.

6	11	25
8	6	16
12	5	?

Option 1:
18

Option 2:
16

Option 3:
12

Option 4:
22

Correct Answer:
22

Solution:
Given:

6	11	25
8	6	16
12	5	?

The pattern is running horizontally along the rows.
Row 1: (6 ÷ 2) × 11 = 3 × 11 = 33; 33 – 8 = 25
Row 2: (8 ÷ 2) × 6 = 4 × 6 = 24; 24 – 8 = 16
Row 3: (12 ÷ 2) × 5 = 6 × 5 = 30; 30 – 8 = 22

So, 22 is the missing number. Hence, the **fourth option** is correct.

Q. 10 **Directions:** Select the missing number from the given responses.

8	5	4
7	6	8
12	20	12
44	10	?

Option 1:
40

Option 2:
30

Option 3:
20

Option 4:
35

Correct Answer:
20

Solution:
Given:

8	5	4
7	6	8
12	20	12
44	10	?

The pattern can be observed running vertically down the columns.

Column 1: 8 × 7 = 56 and 56 – 12 = 44
Column 2: 5 × 6 = 30 and 30 – 20 = 10
Column 3: 4 × 8 = 32 and 32 – 12 = 20

So, 20 is the missing number of the given figure. Hence, the **third option** is correct.

Q. 11 **Directions:** Select the missing number from the given responses.

121	81	49
100	64	36
15	16	25
?	31	41

Option 1:
11

Option 2:
29

Option 3:
24

Option 4:
15

Correct Answer:
29

Solution:
Given:

121	81	49
100	64	36
15	16	25

?	31	41

The pattern is running horizontally along the rows.

Row 1: [(121 + 49) ÷ 2] – 4 = [170 ÷ 2] – 4 = 85 – 4 = 81

Row 2: [(100 + 36) ÷ 2] – 4 = [136 ÷ 2] – 4 = 68 – 4 = 64

Row 3: [(15 + 25) ÷ 2] – 4 = [40 ÷ 2] – 4 = 20 – 4 = 16

Row 4: [((?) + 41) ÷ 2] – 4 = 31

⇒ [((?) + 41) ÷ 2] = 31 + 4

⇒ ((?) + 41) ÷ 2 = 35

⇒ (?) + 41 = 35 × 2

⇒ (?) + 41 = 70

⇒ (?) = 70 – 41

⇒ (?) = 29

So, 29 is the missing number. Hence, the **second option** is correct.

Q. 12 **Directions:** Select the missing number from the given responses.

2	3	4
8	6	9
6	3	5
10	?	29

Option 1:

12

Option 2:

14

Option 3:
16

Option 4:
9

Correct Answer:
9

Solution:
Given:

2	3	4
8	6	9
6	3	5
10	?	29

The pattern is running vertically down in the columns.
Column 1: (2 × 8) + 6 = 16 + 6 = 22; 22 – 12 = 10
Column 2: (3 × 6) + 3 = 18 + 3 = 21; 21 – 12 = 9
Column 3: (4 × 9) + 5 = 36 + 5 = 41; 41 – 12 = 29

So, 9 is the missing number. Hence, the **fourth option** is correct.

Q. 13 **Directions:** Find the missing number from the given responses in the following question.

3	6	7
9	18	21
27	54	?
81	162	189

Option 1:
22

Option 2:
63

Option 3:
190

Option 4:
55

Correct Answer:
63

Solution:
Multiply the number of rows one, row two, and row three by 3 to get the number in the second row, third row, and fourth row respectively.

In the first column: 3 × 3 = 9 and 9 × 3 = 27 and 27 × 3 = 81
In the second column: 6 × 3 = 18 and 18 × 3 = 54 and 54 × 3 = 162
Similarly, follow the same pattern in the third column: 7 × 3 = 21, 21 × 3 = 63, and 63 × 3 = 189

So, 63 is the missing number in the given figure. Hence, the **second option** is correct.

Q. 14 **Directions:** Find the missing number from the given responses.

8	9	10
5	4	3
28	?	16
12	25	14

Option 1:
28

Option 2:
11

Option 3:
32

Option 4:
18

Correct Answer:
11

Solution:
Multiply the numbers of the first and the second row and subtract the number of the fourth row from the resultant to get the number in the third row.

In column one: 8 × 5 = 40; 40 – 12 = 28
In column two: 10 × 3 = 30; 30 – 14 = 16
Similarly, follow the same pattern in column two: 9 × 4 = 36; 36 – 25 = 11

So, the missing number is 11. Hence, the **second option** is correct.

Q. 15 **Directions:** Find the missing number from the given responses in the following question.

1	3	7
2	4	4
4	5	9
3	2	3
50	70	?

Option 1:
23

Option 2:
115

Option 3:
118

Option 4:
220

Correct Answer:
115

Solution:
Add the numbers of the first four rows and multiply the resultant by 5, to get the number of the fourth row.

In the first column: (1 + 2 + 4 + 3) × 5 = 10 × 5 = 50
In the second column: (3 + 4 + 5 + 2) × 5 = 14 × 5 = 70
Similarly, follow the same pattern in the third column: (7 + 4 + 9 + 3) × 5 = 23 × 5 = 115

So, 115 is the missing number in the given figure. Hence, the **second option** is correct.

Q. 16 **Directions:** Find the missing number from the given responses in the following question.

6	9	12
36	81	144
24	63	?

Option 1:
120

Option 2:
80

Option 3:
94

Option 4:
102

Correct Answer:
120

Solution:
Square the numbers of the first row to get the numbers in the second row. Subtract 2 in the number given in the first row and multiply the resultant by the number given in the first row to get the number of the third row.

In coulmn one: $6 \rightarrow 6^2 = (36)$; $6 \times (6 - 2) = 24$
In column two: $9 \rightarrow 9^2 = (81)$; $9 \times (9 - 2) = 63$
Similarly, follow the same pattern in column three: $12 \rightarrow 12^2 = (144)$; $12 \times (12 - 2) = 120$

So, 120 is the required missing number. Hence, the **first option** is correct.

Q. 17 **Directions:** In the following question, select the missing number front the given responses.

12	15	36
03	04	05
04	06	04
40	66	?

Option 1:
104

Option 2:
320

Option 3:
25

Option 4:
184

Correct Answer:
184

Solution:
In a column, multiply the first two numbers, and then add the third number in the resultant number to get the fourth number.

In the first column: (12 × 3) + 4 = 36 + 4 = 40
In the second column: (15 × 4) + 6 = 60 + 6 = 66
Similarly, in the third column: (36 × 5) + 4 = 180 + 4 = 184

So, 184 is the missing number in the given figure. Hence, the **fourth option** is correct.

Q. 18 **Directions:** In the following question, select the number that can be placed at the sign of the question mark (?) from the given alternatives.

3	5
2	6
8	1

2	4
3	8
2	6

9	3
2	1
7	?

Option 1:
1

Option 2:
2

Option 3:
3

Option 4:
4

Correct Answer:
3

Solution:
Here, the sum of the numbers in the first and second figures is 25, so it should be the same in the third figure as well.

In the first figure: (3 + 2 + 8) + (5 + 6 + 1) = 13 + 12 = 25
In the second figure: (2 + 3 + 2) + (4 + 8 + 6) = 7 + 18 = 25
In the third figure: 25 – {(9 + 2 + 7) + (3 + 1)} = 25 – 22 = 3

So, the required missing number is 3. Hence, the **third option** is correct.

Q. 19 **Directions:** Find the missing number from the given responses.

9	6	?
8	5	6
7	4	3
65	26	39

Option 1:
7

Option 2:
8

Option 3:
10

Option 4:
9

Correct Answer:
7

Solution:
Multiply the first two numbers in the column and then subtract the third number to get the fourth number in each column.

In the first column: (9 × 8) – 7 = 72 – 7 = 65
In the second column: (6 × 5) – 4 = 30 – 4 = 26
Similarly, in the third column: (? × 6) – 3 = 39

(? × 6) = 39 + 3

? = 42 ÷ 6

? = 7

So, 7 is the missing number in the given figure. Hence, the **first option** is correct.

Q. 20 **Directions:** Find the missing number from the given responses.

15	25	30
60	100	?
240	400	480

Option 1:
125

Option 2:
110

Option 3:
120

Option 4:
126

Correct Answer:
120

Solution:

Multiply the numbers of row one by 4 to get the number of the second row and multiply the number of the second row by 4 to get the number of the third row.

In the first column: 15 × 4 = 60 and 60 × 4 = 240
In the second column: 25 × 4 = 100 and 100 × 4 = 400
Similarly, follow the same pattern in the third column: 30 × 4 = 120 and 120 × 4 = 480

So, 120 is the missing number in the given figure. Hence, the **third option** is correct.

Q. 21 **Directions:** Find the missing number from the given responses.

6	7	8
36	49	64
18	28	?

Option 1:
53

Option 2:
48

Option 3:
32

Option 4:
40

Correct Answer:
40

Solution:
In a column, find the square of the first number to get the second number and then multiply the first number by consecutive natural numbers(starting from 3) to get the third number.

In the first column: $6^2 = 36$ and $6 \times 3 = 18$
In the second column: $7^2 = 49$ and $7 \times 4 = 28$
Similarly, in the third column: $8^2 = 64$ and $8 \times 5 = 40$

So, 40 is the missing number in the given figure. Hence, the **fourth option** is correct.

Q. 22 **Directions:** In the following question, select the number that can be placed at the sign of the question mark (?) from the given alternatives.

7	3	2
6	11	5
5	1	8
72	?	50

Option 1:
38

Option 2:
40

Option 3:
42

Option 4:
44

Correct Answer:
44

Solution:
Add the number of row one to the number of row three
then multiply the resultant by the number of row two, to get the number of the fourth row.

In column one: (7 + 5) × 6 = 12 × 6 = 72
In column two: (2 + 8) × 5 = 10 × 5 = 50
Similarly, follow the same pattern in the second column: (3 + 1) × 11 = 4 × 11 = 44

So, the missing number is 44. Hence, the **fourth option** is correct.

Q. 23 **Directions:** In the following question, select the number that can be placed at the sign of the question mark (?) from the given alternatives.

1	7	2
8	6	4
9	2	5
4	7	?

Option 1:
9

Option 2:
10

Option 3:
11

Option 4:
12

Correct Answer:
11

Solution:
Here, the sum of all the numbers in each column is 22.

In column one: 1 + 8 + 9 + 4 = 22
In column two: 7 + 6 + 2 + 7 = 22
Similarly, follow the same pattern in the third column: 2 + 4 + 5 + ? = 22⇒? = 22 – 11 = 11

So, the missing number is 11. Hence, the **third option** is correct.

Q. 24 **Directions:** In the following question, select the number that can be placed at the sign of the question mark (?) from the given alternatives.

1	4
10	7

5	8
14	11

6	9
?	12

Option 1:
13

Option 2:
14

Option 3:
15

Option 4:
16

Correct Answer:
15

Solution:
In each figure, starting from the top left corner add 3 in each number in a clockwise direction, to get the required missing number.

In figure one: 1 + 3 = 4; 4 + 3 = 7; 7 + 3 = 10
In figure two: 5 + 3 = 8; 8 + 3 = 11; 11 + 3 = 14
Similarly, follow the same pattern in figure three: 6 + 3 = 9; 9 + 3 = 12; 12 + 3 = 15

So, the missing number is 15. Hence, the **third option** is correct.

Q. 25 **Directions:** In the following question, select the number that can be placed at the sign of the question mark (?) from the given alternatives.

1	4	2	13
3	6	5	95
2	4	3	?

Option 1:
12

Option 2:
24

Option 3:
26

Option 4:
29

Correct Answer:
29

Solution:
Multiply the numbers of column one, column two, and column three and add 5 to the resultant to get the number in column four.

In the first row: (1 × 4 × 2) + 5 = 8 + 5 = 13
In the second row: (3 × 6 × 5) + 5 = 90 + 5 = 95
Similarly, in the third row: (2 × 4 × 3) + 5 = 24 + 5 = 29

So, 29 is the missing number in the given figure. Hence, the **fourth option** is correct.

Q. 26 **Directions:** In the following question, select the number that can be placed at the sign of the question mark (?) from the given alternatives.

3	4	2	6
?	2	5	3
4	2	2	7

Option 1:
3

Option 2:
4

Option 3:
5

Option 4:
6

Correct Answer:
5

Solution:
The sum of all the numbers in each column is 15.

In the first row: 3 + 4 + 2 + 6 = 15
In the third row: 4 + 2 + 2 + 7 = 15
Similarly, follow the same pattern in the second row:
? + 2 + 5 + 3 = 15
? = 15 – 10
? = 5

So, 5 is the missing number in the given figure. Hence, the **third option** is correct.

Q. 27 **Directions:** In the following question, select the number that can be placed at the sign of the question mark (?) from the given alternatives.

3	4	2
1	6	5
4	2	3
20	14	?

Option 1:
11

Option 2:
12

Option 3:
14

Option 4:
16

Correct Answer:
16

Solution:
Square the number given in the third row and add the resultant with the sum of the number of the first and second rows to get the required missing number.

In the first column: $4^2 = 16$ and $16 + 3 + 1 = 20$
In the second column: $2^2 = 4$ and $4 + 4 + 6 = 14$
Similarly, follow the same pattern in the third column: $3^2 = 9$ and $9 + 2 + 5 = 16$

So, 16 is the missing number in the given matrix. Hence, the **fourth option** is correct.

Q. 28 **Directions:** In the following question, select the number that can be placed at the sign of the question mark (?) from the given alternatives.

3	11	5	45
2	4	6	44
3	7	8	?

Option 1:
72

Option 2:
76

Option 3:
80

Option 4:
84

Correct Answer:
80

Solution:
In the row, add the square of the first and the third number and the add second number to the resultant number to obtain the fourth number.

In the first row: $3^2 + 5^2 = 9 + 25 = 34$ and $34 + 11 = 45$
In the second row: $2^2 + 6^2 = 4 + 36 = 40$ and $40 + 4 = 44$
Similarly, in the third row: $3^2 + 8^2 = 9 + 64 = 73$ and $73 + 7 = 80$

So, 80 is the missing number in the given figure. Hence, the **third option** is correct.

Q. 29 **Directions:** In the following question, select the number that can be placed at the sign of the question mark (?) from the given alternatives.

3	4	2
7	5	1
8	6	3
?	54	9

Option 1:
60

Option 2:
70

Option 3:
75

Option 4:
80

Correct Answer:
80

Solution:
In a column, add the first two numbers and then multiply the resultant number by the third number to get the fourth number.

In the second column→(4 + 5) × 6 = 9 × 6 = 54
In the third column→(2 + 1) × 3 = 3 × 3 = 9
Similarly, in the first column→(3 + 7) × 8 = 10 × 8 = 80

So, 80 is the missing number in the given figure. Hence, the **fourth option** is correct.

Q. 30 **Directions:** In the following question, select the number which can be placed at the sign of the question mark (?) from the given alternatives.

5	1	3	7
6	2	4	4
1	?	2	7

Option 1:
3

Option 2:
4

Option 3:
5

Option 4:
6

Correct Answer:
6

Solution:
Here, the sum of the numbers of the first and second rows is 16, so it should also be the same in the third row.

In the row one: 5 + 1 + 3 + 7 = 16
In the row two: 6 + 2 + 4 + 4 = 16
Similarly, in row three, all the numbers should add up to 16.
Therefore, 16 – (1 + 2 + 7) = 6

So, 6 is the required missing number. Hence, the **fourth option** is correct.

Q. 31 **Directions:** In the following question, select the number that can be placed at the sign of the question mark (?) from the given alternatives.

2	5	3
6	7	8
3	2	2
43	76	?

Option 1:
72

Option 2:
75

Option 3:
63

Option 4:
69

Correct Answer:
75

Solution:

Given:

2	5	3
6	7	8
3	2	2
43	76	?

The pattern can be observed running vertically along the columns.
Column 1: $((2)^2 + (6)^2) + 3 = 4 + 36 + 3 = 43$
Column 2: $((5)^2 + (7)^2) + 2 = 25 + 49 + 2 = 76$
Column 3: $((3)^2 + (8)^2) + 2 = 9 + 64 + 2 = 75$

So, 75 is the missing term in the given figure. Hence, the **second option** is correct.

Q. 32 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

557	835	504
447	753	612
502	794	?

Option 1:
596

Option 2:
552

Option 3:
558

Option 4:
544

Correct Answer:
558

Solution:
Add row one and row two and divide the resultant by 2 to get the third row –

In column one: (557 + 447) ÷ 2 = 1004 ÷ 2 = 502
In column two: (835 + 753) ÷ 2 = 1588 ÷ 2 = 794
In column three : (504 + 612) ÷ 2 = 1116 ÷ 2 = 558

So, the required missing number in the matrix is 558. Hence, the **third option** is correct.

Q. 33 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

46	12	30	28
32	16	?	30
54	10	29	35

Option 1:
20

Option 2:
16

Option 3:
22

Option 4:
18

Correct Answer:
18

Solution:
Subtract column three from the sum of column one and column two, to get column four –

In row one: 46 + 12 – 30 = 28
In row three: 54 + 10 – 29 = 35
Similarly, follow the same pattern for row two: 32 + 16 – X = 30; X = 18

So, 18 is the required number in the given figure. Hence, the **fourth option** is correct.

Q. 34 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

8	27	32	16
12	18	16	20
18	12	?	25

Option 1:
8

Option 2:
14

Option 3:
10

Option 4:
12

Correct Answer:
8

Solution:
Multiply row one with row three and determine the square root of the resultant, to get the required missing number of row two –

In column one: $8 \times 18 = 144 = \sqrt{144} = 12$
In column two : $27 \times 12 = 324 = \sqrt{324} = 18$
In column four : $16 \times 25 = 400 = \sqrt{400} = 20$
Similarly, by following the same pattern for$\rightarrow 32 \times ? = 16^2 \Rightarrow ? = 256/32 \Rightarrow ? = 8$

So, the required missing number in the matrix is 8. Hence, the **first option** is correct.

Q. 35 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

9	8	7
6	7	8
4	5	3
50	?	53

Option 1:
51

Option 2:
61

Option 3:
47

Option 4:
52

Correct Answer:
51

Solution:
Multiply row one with row two and subtract the resultant by row three, to get the required missing number in row four –

In column one : 9 × 6 – 4 = 54 – 4 = 50
In column three: 7 × 8 – 3 = 56 – 3 = 53
In column two: 8 × 7 – 5 = 56 – 5 = 51

So, the required missing number in the matrix is 51. Hence, the **first option** is correct.

Q. 36 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

3	2	38	5
5	3	?	4
7	1	54	2

Option 1:
48

Option 2:
52

Option 3:
40

Option 4:
50

Correct Answer:
50

Solution:

The sum of the square of columns one, two, and four is equal to the third column –

In the first row: $3^2 + 2^2 + 5^2 = 38$
In the third row: $7^2 + 1^2 + 2^2 = 54$
Similarly, follow the same pattern in the second row: $5^2 + 3^2 + 4^2 = 50$

Therefore, the required missing number is 50. Hence, the **fourth option** is correct.

Q. 37 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

14	16	60
11	17	?
15	18	99

Option 1:
78

Option 2:
168

Option 3:
144

Option 4:
89

Correct Answer:
168

Solution:
The pattern can be observed running horizontally –
First row: (14 + 16) × (16 – 14) = 30 × 2 = 60
Third row: (15 + 18) × (18 – 15) = 33 × 3 = 99
Similarly, **Second row:** (11 + 17) × (17 – 11) = 28 × 6 = 168

So, 168 is the missing number. Hence, the **second option** is correct.

Q. 38 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

?	8	11
7	6	5
48	63	72

Option 1:
7

Option 2:
5

Option 3:
6

Option 4:
4

Correct Answer:
5

Solution:
The pattern is observed in a vertical direction along the columns.
Second column: (8 + 1) × (6 + 1) = 9 × 7 = 63
Third column: (11 + 1) × (5 + 1) = 12 × 6 = 72
Similarly, **First column:** Let the missing number be a.
⇒ (a + 1) × (7 + 1) = 48
⇒ (a + 1) × 8 = 48
⇒ (a + 1) = 48 ÷ 8
⇒ (a + 1) = 6
⇒ a = 6 – 1
⇒ a = 5

So, 5 is the missing number. Hence, the **second option** is correct.

Q. 39 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

28	58	118
21	44	90
47	96	?

Option 1:
194

Option 2:
150

Option 3:
176

Option 4:
188

Correct Answer:
194

Solution:
The pattern runs horizontally along the rows –
First row: {(58 – 28) × 4} – 2 = {30 × 4} – 2 = 120 – 2 = 118
Second row: {(44 – 21) × 4} – 2 = {23 × 4} – 2 = 92 – 2 = 90
Similarly, for the **Third row:** {(96 – 47) × 4} – 2 = {49 × 4} – 2 = 196 – 2 = 194

So, 194 is the missing number. Hence, the **first option** is correct.

Q. 40 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

54	40	56
68	57	44
47	39	?

Option 1:
22

Option 2:
30

Option 3:
32

Option 4:
39

Correct Answer:
32

Solution:
Multiply the difference of the number of column one and column two by 4, to get the number of the third column –

In row one: (54 – 40) × 4 = 14 × 4 = 56
In row two: (68 – 57) × 4 = 11 × 4 = 44
Similarly, follow the same pattern for row three: (47 – 39) × 4 = 8 × 4 = 32

So, 32 is the required missing number. Hence, the **third option** is correct.

Q. 41 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

14	28	98
7	48	84
?	60	60

Option 1:
15

Option 2:
12

Option 3:
16

Option 4:
4

Correct Answer:
4

Solution:
Given:

14	28	98
7	48	84
?	60	60

The pattern can be observed running horizontally along the rows.
Row 1: (14 × 28) ÷ 4 = 392 ÷ 4 = 98
Row 2: (7 × 48) ÷ 4 = 336 ÷ 4 = 84
Row 3: ((?) × 60) ÷ 4 = 60
⇒ (?) × 60 = 60 × 4
⇒ (?) × 60 = 240
⇒ (?) = 240 ÷ 60 = 4

So, 4 is the missing number. Hence, the **fourth option** is correct.

Q. 42 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

9	8	12
6	3	8
45	?	80

Option 1:
60

Option 2:
50

Option 3:
55

Option 4:
75

Correct Answer:
55

Solution:
Given:

9	8	12
6	3	8
45	?	80

The pattern can be observed running vertically down the columns.

Column 1: $(9)^2 - (6)^2 = 81 - 36 = 45$

Column 3: $(12)^2 - (8)^2 = 144 - 64 = 80$

Column 2: $(8)^2 - (3)^2 = 64 - 9 = 55$

So, 55 is the missing number. Hence, the **third option** is correct.

Q. 43 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

4507	7077	37
2503	3067	26
3307	4061	?

Option 1:
72

Option 2:
24

Option 3:
67

Option 4:
45

Correct Answer:
24

Solution:

Given:

4507	7077	37
2503	3067	26
3307	4061	?

The pattern can be observed running horizontally along the rows.

Row 1: (4 + 5 + 0 + 7) + (7 + 0 + 7 + 7) = 37

Row 2: (2 + 5 + 0 + 3) + (3 + 0 + 6 + 7) = 26

Row 3: (3 + 3 + 0 + 7) + (4 + 0 + 6 + 1) = 24

So, 24 is the missing number. Hence, the **second option** is correct.

Q. 44 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

16	14	19
391	270	?
23	18	14

Option 1:
280

Option 2:
258

Option 3:
320

Option 4:
240

Correct Answer:
280

Solution:
Given:

16	14	19
391	270	?
23	18	14

The pattern can be observed running vertically down the columns.
Column 1: (16 + 1) × 23 = 17 × 23 = 391
Column 2: (14 + 1) × 18 = 15 × 18 = 270
Column 3: (19 + 1) × 14 = 20 × 14 = 280

So, 280 is the missing number. Hence, the **first option** is correct.

Q. 45 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

14	26	182
24	16	192
?	22	187

Option 1:
21

Option 2:
30

Option 3:
23

Option 4:
17

Correct Answer:
17

Solution:
Given:

14	26	182
24	16	192
?	22	187

The pattern can be observed running horizontally along the rows.
Row 1: (182 × 2) ÷ 26 = 364 ÷ 26 = 14
Row 2: (192 × 2) ÷ 16 = 384 ÷ 16 = 24
Row 3: (187 × 2) ÷ 22 = 374 ÷ 22 = 17

So, 17 is the missing number. Hence, the **fourth option** is correct.

Q. 46 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

17	18	19
21	22	?
396	437	520

Option 1:
30

Option 2:
27

Option 3:
25

Option 4:
28

Correct Answer:
25

Solution:
Given:

17	18	19
21	22	?
396	437	520

The pattern can be observed running vertically down the columns.
Column 1: (17 × 21) + (17 + 21) + 1 = 357 + 38 + 1 = 396
Column 2: (18 × 22) + (18 + 22) + 1 = 396 + 40 + 1 = 437
Column 3: (19 × (?)) + (19 + (?)) + 1 = 520
⇒ (19 × (?)) + 19 + (?) = 520 – 1
⇒ (19 × (?)) + 19 + (?) = 519
⇒ (19 × (?)) + (?) = 519 – 19 = 500
⇒ (?) × (19 + 1) = 500
⇒ (?) × 20 = 500
⇒ (?) = 500 ÷ 20 = 25

So, 25 is the missing number. Hence, the **third option** is correct.

Q. 47 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

125	8	64
27	55	72
135	?	288

Option 1:
192

Option 2:
144

Option 3:
110

Option 4:
208

Correct Answer:
110

Solution:
Given:

125	8	64
27	55	72
135	?	288

Column 1: $\sqrt[3]{125} \times 27 = 5 \times 27 = 135$
Column 3: $\sqrt[3]{64} \times 72 = 4 \times 72 = 288$
Column 2: $\sqrt[3]{8} \times 55 = 2 \times 55 = 110$

So, 110 is the missing number. Hence, the **third option** is correct.

Q. 48 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

17	41	?
15	24	29
49	106	85

Option 1:
37

Option 2:
28

Option 3:
32

Option 4:
24

Correct Answer:
28

Solution:
Given:

17	41	?
15	24	29
49	106	85

The pattern can be observed running vertically down the columns.
Column 1: (17 × 2) + 15 = 34 + 15 = 49
Column 2: (41 × 2) + 24 = 82 + 24 = 106
Column 3: ((?) × 2) + 29 = 85
⇒ ((?) × 2) = 85 – 29
⇒ ((?) × 2) = 56
⇒ (?) = 56 ÷ 2 = 28

So, 28 is the missing term. Hence, the **second option** is correct.

Q. 49 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

19	9	140
17	9	130
?	5	120

Option 1:
47

Option 2:
28

Option 3:
24

Option 4:
19

Correct Answer:
19

Solution:
Given:

19	9	140
17	9	130
?	5	120

The pattern can be observed running horizontally along the rows.
Row 1: (140 ÷ 5) – 9 = 28 – 9 = 19
Row 2: (130 ÷ 5) – 9 = 26 – 9 = 17
Row 3: (120 ÷ 5) – 9 = 24 – 5 = 19

So, 19 is the missing number. Hence, the **fourth option** is correct.

Q. 50 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

36	55	49
64	47	39
49	?	61

Option 1:
72

Option 2:
120

Option 3:
88

Option 4:
68

Correct Answer:
68

Solution:
Given:

36	55	49
64	47	39
49	?	61

The pattern can be observed running horizontally along the rows –
Row 1: √(36) + 49 = 6 + 49 = 55
Row 2: √(64) + 39 = 8 + 39 = 47
Row 3: √(49) + 61 = 7 + 61 = 68

So, 68 is the missing number. Hence, the **fourth option** is correct.

Q. 51 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

18	21	24
24	33	27
12	?	16
16	22	18

Option 1:
36

Option 2:
32

Option 3:
42

Option 4:
38

Correct Answer:
42

Solution:
Given:

18	21	24
24	33	27
12	?	16

16	22	18

Multiply the third number and the fourth number of the column by 1.5 to obtain the first and the second number.

In first column; 12 × 1.5 = 18; 16 × 1.5 = 24
In third column; 16 × 1.5 = 24; 18 × 1.5 = 27
Similarly, In the second column –
? × 0.5 = 21
? = 21 ÷ 0.5
? = 42
and, 22 × 1.5 = 33

So, the required number is 42. Hence, the **third option** is correct.

Q. 52 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

36	49	43
42	64	?
24	36	30

Option 1:
38

Option 2:
32

Option 3:
50

Option 4:
36

Correct Answer:
50

Solution:
Square the difference of the first column from the third column to get the second column –

In the first row: $(43 - 36)^2 = (7)^2 = 49$
In the third row: $(30 - 24)^2 = (6)^2 = 36$
Similarly, follow the same pattern in the second row: $(? - 42)^2 = 64 \Rightarrow ? = \sqrt{64} + 42 \Rightarrow ? = 50$

So, from the above, 50 is the required number of the given figure. Hence, the **third option** is correct.

Q. 53 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

12	9	14
6	?	8
7	10	4
14	18	7

Option 1:
8

Option 2:
6

Option 3:
7

Option 4:
5

Correct Answer:
5

Solution:
The multiplication of the first and third rows is equal to the multiplication of the second and fourth row –

In the first column: (12 × 7) = (6 × 14) ⇒ 84 = 84
In the third column: (14 × 4) = (8 × 7) ⇒ 56 = 56
Similarly, follow the same pattern for (9 × 10) = (? × 18) ⇒ 90 = ? × 18 ⇒ ? = 90/18 ⇒ ? = 5

So, from the above, 5 is the required number of the given figure. Hence, the **fourth option** is correct.

Q. 54 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

3	18	27
14	13	?
34	62	98

Option 1:
25

Option 2:
22

Option 3:
15

Option 4:
23

Correct Answer:
22

Solution:
Multiply the sum of the first and second rows by 2 to get the third row –

In the first column: (3 + 14) × 2 = 17 × 2 = 34
In the second column: (18 + 13) × 2 = 31 × 2 = 62
Similarly, following the same pattern in the third column: (27 + ?) × 2

= 98 ⇒ ? = 98/2 – 27 ⇒ ? = 22

So, from the above, 22 is the required number of the given figure. Hence, the **second option** is correct.

Q. 55 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

12	4	11	33
13	2	6	39
14	7	5	10
18	?	2	9

Option 1:
3

Option 2:
5

Option 3:
8

Option 4:
4

Correct Answer:
4

Solution:

Multiply the first and third columns and divide the resultant by the second column, to get the fourth column –

In the first row: (12 × 11) ÷ 4 = 132 ÷ 4 = 33
In the second row: (13 × 6) ÷ 2 = 78 ÷ 4 = 39
In the third row: (14 × 5) ÷ 7 = 70 ÷ 7 = 70
Similarly, follow the same pattern in the fourth row: (18 × 2) ÷ ? = 9
⇒ ? = 36 ÷ 9 = 4

So, from the above, 4 is the required number of the given figure. Hence, the **fourth option** is correct.

Q. 56 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

4	18	23
19	330	?
3	6	1

Option 1:
350

Option 2:
530

Option 3:
529

Option 4:
550

Correct Answer:
530

Solution:
Given:

4	18	23
19	330	?
3	6	1

The pattern can be observed running vertically down the columns –
Column 1: $(4)^2 + 3 = 16 + 3 = 19$
Column 2: $(18)^2 + 6 = 324 + 6 = 330$
Column 3: $(23)^2 + 1 = 529 + 1 = 530$

So, 530 is the missing number. Hence, the **second option** is correct.

Q. 57 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

14	4	28
21	6	63
45	8	?

Option 1:
210

Option 2:
180

Option 3:
195

Option 4:
150

Correct Answer:
180

Solution:
In a row of the given table, multiply the first and second numbers and then divide by 2 to obtain the third number.

In the first row→(14 × 4) ÷ 2 = 56 ÷ 2 = 28
In the second row→(21 × 6) ÷ 2 = 126 ÷ 2 = 63
Similarly, in the third row→(45 × 8) ÷ 2 = 360 ÷ 2 = 180

So, 180 is the missing number in the given figure. Hence, the **second option** is correct.

Q. 58 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

3	18	7
28	71	35
48	65	?
60	108	98

Option 1:
21

Option 2:
14

Option 3:
23

Option 4:
72

Correct Answer:
21

Solution:
In a column of the given table, find the difference between the second and the third numbers and then multiply the resultant number by the first number to obtain the fourth number.

In the first column→(48 – 28) × 3 = 20 × 3 = 60
In the second column→(71 – 65) × 18 = 6 × 18 = 108
Similarly, in the third column→
⇒ (35 – x) × 7 = 98
⇒ (35 – x) = 98 ÷ 7
⇒ (35 – x) = 14
⇒ x = 35 – 14 = 21

So, 21 is the missing number in the given figure. Hence, the **first option** is correct.

Q. 59 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

12	33	28
9	12	?
13	40	17

Option 1:
16

Option 2:
61

Option 3:
51

Option 4:
15

Correct Answer:
61

Solution:
Given:

12	33	28
9	12	?
13	40	17

Solve the figure column-wise. In the column, the difference between the first and second number is divisible by 3 and the difference between the third number and the second number is divisible by 4
In column I; 12 – 9 = 3, 13 – 9 = 4
In column II; 33 – 12 = 21, 40 – 12 = 28
Similarly, In column III; X – 28 = ?, X – 17 = ?
According to the options put the value of X = 61; 61 – 28 = 33, 61 – 17 = 44

So, the required number in the matrix is 61. Hence, the **second option** is correct.

Q. 60 **Directions:** Find the missing number from the given responses.

2	7	14
3	4	5
75	165	?

Option 1:
185

Option 2:
285

Option 3:
165

Option 4:
425

Correct Answer:
285

Solution:
Here, the sum of the first two is multiplied by 15 to get the missing term.

In column one; 2 + 3 = 5 ⇒ 5 × 15 = 75
In column two; 7 + 4 = 11 ⇒ 11 × 15 = 165
Similarly, in column three; 14 + 5 = 19 ⇒ 19 × 15 = 285

So, 285 is the missing number. Hence, the **second option** is correct.

Q. 61 **Directions:** In the following question, select the missing number from the given responses.

1	4	9	16
1	2	3	4
2	4	6	?

Option 1:
7

Option 2:
5

Option 3:
4

Option 4:
8

Correct Answer:
8

Solution:
In the matrix, the numbers in the third row are twice those in the second row.

In column one; 1 × 2 = 2
In column two; 2 × 2 = 4
In column three; 3 × 2 =6
Similarly, in column four; 4 × 2 = 8

So, the missing number is 8. Hence, the **fourth option** is correct.

Q. 62 **Directions:** In the following question, select the missing number from the given responses.

121	100	?	169
4	8	9	7
7	2	5	6

Option 1:
114

Option 2:
196

Option 3:
214

Option 4:
81

Correct Answer:
196

Solution:
Here, in each column, if the last two numbers are added and squared we will get the first number in the column –

In column one; $4 + 7 = 11 \Rightarrow (11)^2 = 121$
In column two; $8 + 2 = 10 \Rightarrow (10)^2 = 100$
In column three; $9 + 5 = 14 \Rightarrow (14)^2 = 196$
Similarly, in column four; $7 + 6 = 13 \Rightarrow (13)^2 = 169$

So, the missing number is 196 Hence, the **second option** is correct.

Q. 63 **Directions**: In the following question, select the number which can be placed at the sign of the question mark (?) from the given alternatives.

5	4	3
8	7	1
6	2	9
38	15	?

Option 1:
16

Option 2:
12

Option 3:
28

Option 4:
13

Correct Answer:
28

Solution:
Here, the multiplication of the first and third rows is added to the second row which equals the fourth row of the matrix.

In the first column; $5 \times 6 + 8 = 30 + 8 = 38$
In the second column; $4 \times 2 + 7 = 8 + 7 = 15$
In the third column; $3 \times 9 + 1 = 27 + 1 = 28$

So, the missing term is 28. Hence, the **third option** is correct.

Q. 64 **Directions:** In the following question, select the number that can be placed at the sign of the question mark (?) from the given alternatives.

4	6	3
9	5	2
6	8	7
?	19	12

Option 1:
19

Option 2:
17

Option 3:
15

Option 4:
20

Correct Answer:
19

Solution:
Given:

4	6	3
9	5	2

6	8	7
?	19	12

The pattern is running vertically down in the columns.

Column 2: 6 + 5 + 8 = 19

Column 3: 3 + 2 + 7 = 12

Column 1: 4 + 9 + 6 = 19

So, 19 is the missing term. Hence, the **first option** is correct.

Q. 65 **Directions**: In the following question, select the number which can be placed at the sign of the question mark (?) from the given alternatives.

3	4	1
2	5	6
7	2	8
13	22	?

Option 1:
12

Option 2:
13

Option 3:
14

Option 4:
16

Correct Answer:
14

Solution:
Here, the multiplication of the first and second rows is added to the third row which equals the fourth row of the matrix.

In the first column; 3 × 2 + 7 = 6 + 7 = 13
In the second column; 4 × 5 + 2 = 20 + 2 = 22
In the third column; 1 × 6 + 8 = 6 + 8 = 14

So, the missing term is 14. Hence, the **third option** is correct.

Q. 66 **Directions:** Select the missing number from the given alternatives.

6	5	7
7	8	4
11	12	?
462	480	224

Option 1:
7

Option 2:
8

Option 3:
6

Option 4:
9

Correct Answer:
8

Solution:
In a column, multiply the first number by the second number and then the third number to get the fourth number.

In the first column: 6 × 7 × 11 = 462
In the second column: 5 × 8 × 12 = 480
Similarly, follow the same pattern in the third column: 7 × 4 × ? = 224
⇒ 28 × ? = 224
⇒ ? = 224 ÷ 28 = 8

So, 8 is the missing number in the given figure. Hence, the **second option** is correct.

Q. 67 **Directions:** Select the missing number from the given responses.

36	64	100
6	8	10
12	16	?

Option 1:
10

Option 2:
20

Option 3:
22

Option 4:
110

Correct Answer:
20

Solution:
In a column, determine the square root of the first number to get the second number, and then multiply the second number by 2 to get the third number.

In the first column: $\sqrt{36}$ = 6 and 6 × 2 = 12
In the second column: $\sqrt{64}$ = 8 and 8 × 2 = 16
Similarly, follow the same pattern in the third column: $\sqrt{100}$ = 10 and 10 × 2 = 20

So, 20 is the missing number in the given matrix. Hence, the **second option** is correct.

Q. 68 **Directions:** Select the missing number from the given responses.

2	7	8
7	5	3
3	8	?
42	280	120

Option 1:
4

Option 2:
5

Option 3:
6

Option 4:
7

Correct Answer:
5

Solution:
In a column, multiply the first number by the second number and then the third number to get the fourth number.

In the first column: 2 × 7 × 3 = 42
In the second column: 7 × 5 × 8 = 280
Similarly, in the third column: 8 × 3 × ? = 120
⇒ 24 × ? = 120
⇒ ? = 120 ÷ 24 = 5

So, 5 is the missing number in the given matrix. Hence, the **second option** is correct.

Q. 69 **Directions:** In the following question, select the number that can be placed at the sign of the question mark (?) from the given alternatives.

2	7	6	20
2	4	3	14
5	8	7	?

Option 1:
20

Option 2:
25

Option 3:
27

Option 4:
30

Correct Answer:
25

Solution:
In each row, add 5 to the sum of the first, second, and third numbers to get the fourth number.

In row one: (2 + 7 + 6) + 5 = 20
In row two: (2 + 4 + 3) + 5 = 14
In row three: (5 + 8 + 7) + 5 = 25

So, 25 is the missing number. Hence, the **second option** is correct.

Q. 70 **Directions:** In the following question, select the number that can be placed at the sign of the question mark (?) from the given alternatives.

4	5	8
3	12	?
5	13	17

Option 1:
15

Option 2:
12

Option 3:
13

Option 4:
9

Correct Answer:
15

Solution:
Subtract the square of the number of row three from the square of row one and then find the square root of the resultant to get the number in the second row.

In column one: $(5)^2 - (4)^2 = 25 - 16 = 9$; $\sqrt{(9)} = 3$
In column two: $(13)^2 - (5)^2 = 169 - 25 = 144$; $\sqrt{(144)} = 12$
In column three: $(17)^2 - (8)^2 = 289 - 64 = 225$; $\sqrt{(225)} = 15$

So, 15 is the missing number. Hence, the **first option** is correct.

Q. 71 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

125	25	10
216	49	13
27	121	?

Option 1:
16

Option 2:
8

Option 3:
12

Option 4:
14

Correct Answer:
14

Solution:
Add the cube root of the first column with the square root of the second column, to get the missing number in the third column –

In row one –
$\sqrt[3]{125} + \sqrt[2]{25} = 5 + 5 = 10$
In row two –
$\sqrt[3]{216} + \sqrt[2]{49} = 6 + 7 = 13$
Similarly, follow the same pattern for row three –
$\sqrt[3]{27} + \sqrt[2]{121} = 3 + 11 = 14$

Therefore, the required missing number in the matrix is 14. Hence, the **fourth option** is correct.

Q. 72 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

14	12	336
15	18	540
16	?	416

Option 1:
13

Option 2:
12

Option 3:
11

Option 4:
14

Correct Answer:
13

Solution:
Given:

14	12	336
15	18	540
16	?	416

The pattern can be observed running horizontally along the rows.

Row 1: (14 × 12) × 2 = 336

Row 2: (15 × 18) × 2 = 540

Row 3: (16 × (?)) × 2 = 416

⇒ 32 × (?) = 416

⇒ (?) = 416 ÷ 32

⇒ (?) = 13

So, the required missing number is 13. Hence, the **first option** is correct.

Q. 73 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

15	25	45
5	6	8
15	30	?

Option 1:
60

Option 2:
61

Option 3:
76

Option 4:
72

Correct Answer:
72

Solution:
Divide the first number by 5 and multiply with the second number –
Column I: (15 ÷ 5) × 5 = 3 × 5 = 15
Column II: (25 ÷ 5) × 6 = 5 × 6 = 30
Column III: (45 ÷ 5) × 8 = 9 × 8 = 72

Therefore, the required missing number is 72. Hence, the **fourth option** is correct.

Q. 74 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

7	14	144
11	16	234
12	?	266

Option 1:
17

Option 2:
18

Option 3:
19

Option 4:
20

Correct Answer:
17

Solution:
Add two to both the first and the second numbers and multiply the resultants –
Row I: (7 + 2) × (14 + 2) = 9 × 16 = 144
Row II: (11 + 2) × (16 + 2) = 13 × 18 = 234
Similarly, in **Row III:** (12 + 2) × (X + 2) = 266
⇒ 14 × (X + 2) = 266
⇒ X + 2 = 266 ÷ 14
⇒ X = 19 – 2
⇒ X = 17

So, the missing number is 17. Hence, the **first option** is correct.

Q. 75 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

40	57	285
35	32	140
?	40	175

Option 1:
38

Option 2:
36

Option 3:
39

Option 4:
35

Correct Answer:
35

Solution:
Divide the first number by 8 and multiply the resultant with the second number –
Row I: (40 ÷ 8) × 57 = 5 × 57 = 285
Row II: (35 ÷ 8) × 32 = 4.375 × 32 = 140
Similarly, in **Row III:** (X ÷ 8) × 40 = 175
⇒ (X ÷ 8) = 175 ÷ 40
⇒ X = 4.375 × 8
⇒ X = 35

So, the missing number is 35. Hence, the **fourth option** is correct.

Q. 76 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

14	23	97
22	41	167
31	24	?

Option 1:
144

Option 2:
110

Option 3:
134

Option 4:
122

Correct Answer:
134

Solution:
Multiply the sum of the first and second numbers by 3 and then subtract the result from the first number –
Row I: {(14 + 23) × 3} – 14 = 111 – 14 = 97
Row II: {(22 + 41) × 3} – 22 = 189 – 22 = 167
Similarly, in **Row III:** {(31 + 24) × 3} – 31 = 165 – 31 = 134

So, the missing number is 134. Hence, the **third option** is correct.

Q. 77 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

11	14	180
17	18	342
23	20	?

Option 1:
369

Option 2:
504

Option 3:
444

Option 4:
568

Correct Answer:
504

Solution:
Add one to the first and second numbers and then multiply the resultants to get the third number –
Row I: (11 + 1) × (14 + 1) = 12 × 15 = 180
Row II: (17 + 1) × (18 + 1) = 18 × 19 = 342
Similarly, in **Row III:** (23 + 1) × (20 + 1) = 24 × 21 = 504

So, the missing number is 504. Hence, the **second option** is correct.

Q. 78 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

16	27	7
25	8	7
121	?	12

Option 1:
1

Option 2:
16

Option 3:
7

Option 4:
4

Correct Answer:
1

Solution:
The sum of the square root of the first number and the cube root of the second number is equal to the third number –
Row I: $\sqrt[2]{16} + \sqrt[3]{27} = 4 + 3 = 7$
Row II: $\sqrt[2]{25} + \sqrt[3]{8} = 5 + 2 = 7$

Similarly, in **Row III:** $\sqrt[2]{121} + \sqrt[3]{x} = 12$

$\Rightarrow 11 + \sqrt[3]{x} = 12$

$\Rightarrow \sqrt[3]{x} = 12 - 11$

$\Rightarrow x = 1$

So, the missing number is 1. Hence, the **first option** is correct.

Q. 79 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

8	9	73
11	25	?
7	14	63

Option 1:
106

Option 2:
132

Option 3:
146

Option 4:
136

Correct Answer:
146

Solution:

Add the square of the first number to the second number to get the third number –

Row I: $8^2 + 9 = 64 + 9 = 73$

Row III: $7^2 + 14 = 49 + 14 = 63$

Similarly, in **Row II:** $11^2 + 25 = 121 + 25 = 146$

So, the missing number is 146. Hence, the **third option** is correct.

Q. 80 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

25	40	10
81	9	9
?	16	8

Option 1:

30

Option 2:

34

Option 3:

36

Option 4:

32

Correct Answer:
32

Solution:
The cube root of the product of the first and second numbers is equal to the third number –
Row I: 25 × 40 = $\sqrt[3]{1000}$ = 10
Row II: 81 × 9 = $\sqrt[3]{729}$ = 9
Similarly, in **Row III:** X × 16 = 8^3
⇒ X = 512 ÷ 16
⇒ X = 32

So, the missing number is 32. Hence, the **fourth option** is correct.

Q. 81 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

3	45	36
4	?	166
2	3	13

Option 1:
110

Option 2:
100

Option 3:
90

Option 4:
80

Correct Answer:
90

Solution:
The 4th root of the sum of the second and third numbers equals the first number –
Row I: 45 + 36 = 81; $\sqrt[4]{81}$ = 3
Row III: 3 + 13 = 16; $\sqrt[4]{16}$ = 2
Similarly, in **Row II:** 166 + X = 4^4
⇒ X = 256 – 166
⇒ X = 90

So, the missing number is 90. Hence, the **third option** is correct.

Q. 82 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

12	16	32
24	36	288
37	49	?

Option 1:
188

Option 2:
288

Option 3:
178

Option 4:
278

Correct Answer:
288

Solution:
Square the difference between column one and column two and multiply the resultant by 2 to get the third column –

In the first row: $(16 - 12)^2 \times 2 = 4^2 \times 2 = 32$
In the second row: $(36 - 24)^2 \times 2 = 12^2 \times 2 = 288$
Similarly, follow the same pattern in the third row: $(49 - 37)^2 \times 2 = 12^2 \times 2 = 288$

So, from the above, 288 is the required number of the given figure. Hence, the **second option** is correct.

Q. 83 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

11	29	22
17	23	?
112	208	156

Option 1:
20

Option 2:
17

Option 3:
26

Option 4:
16

Correct Answer:
17

Solution:
Multiply the sum of row one and row two by 4 to get the third row –

In the first column: (11 + 17) × 4 = 112
In the second column: (29 + 23) × 4 = 208
Similarly, follow the same pattern in the third column: (22 + ?) × 4 = 156 ⇒ ? = 156/4 – 22 ⇒ ? = 17

So, from the above 17 is the required missing number in the matrix.
Hence, the **second option** is correct.

Q. 84 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

14	9	7
7	4	5
?	10	4

Option 1:
10

Option 2:
14

Option 3:
26

Option 4:
22

Correct Answer:
14

Solution:
Multiply the difference between the first and second rows by 2 to get the third row –

In the second column: (9 – 4) × 2 = 10
In the third column: (7 – 5) × 2 = 2
Similarly, follow the same pattern in the first column: (14 – 7) × 2 =

14

Therefore, the required missing number in the matrix is 14. Hence, the **second option** is correct.

Q. 85 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

8	7	224
11	13	572
12	15	?

Option 1:
360

Option 2:
720

Option 3:
456

Option 4:
320

Correct Answer:
720

Solution:

In a row of the given table, find the square of the sum of the first and second numbers and the square of the difference between the first and second numbers and then subtract both the resultant numbers to obtain the third number.

In the first row→$(8 + 7)^2 – (8 – 7)^2 = (15)^2 – (1)^2 = 225 – 1 = 224$
In the second row→$(11 + 13)^2 – (11 – 13)^2 = (24)^2 – (–2)^2 = 576 – 4 = 572$
Similarly, in the third row→
$(12 + 15)^2 – (12 – 15)^2 = (27)^2 – (–3)^2 = 729 – 9 = 720$

So, 720 is the missing number in the given figure. Hence, the **second option** is correct.

Q. 86 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

4	8	128
3	9	108
5	10	?

Option 1:
236

Option 2:
205

Option 3:
225

Option 4:
220

Correct Answer:
225

Solution:
In a row of the given table, add the cube of the first number and the square of the second number to obtain the third number.

In the first row→$(4)^3 + (8)^2 = 64 + 64 = 128$
In the second row→$(3)^3 + (9)^2 = 27 + 81 = 108$
Similarly, in the third row→
$(5)^3 + (10)^2 = 125 + 100 = 225$

So, 225 is the missing number in the given figure. Hence, the **third option** is correct.

Q. 87 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

9	4	?
5	8	5
28	24	42

Option 1:
14

Option 2:
15

Option 3:
12

Option 4:
16

Correct Answer:
16

Solution:
In a column of the given table, multiply the sum of the first and second numbers by 2 to obtain the third number.

In the first column→2 × (9 + 5) = 2 × 14 = 28
In the second column→2 × (4 + 8) = 2 × 12 = 24
Similarly, in the third column→
⇒ 2 × (x + 5) = 42
⇒ x + 5 = 42 ÷ 2
⇒ x + 5 = 21
⇒ x = 21 – 5
⇒ x = 16

So, 16 is the missing number in the given figure. Hence, the **fourth option** is correct.

Q. 88 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

121	64	144
27	?	8
14	12	14

Option 1:
64

Option 2:
49

Option 3:
56

Option 4:
72

Correct Answer:
64

Solution:
In a column of the given table, add the square root of the first number and the cube root of the second number to obtain the third number.

In the first column→$\sqrt{121} + \sqrt[3]{27}$ = 11 + 3 = 14

In the third column→$\sqrt{144} + \sqrt[3]{8}$ = 12 + 2 = 14

Similarly, in the second column→

⇒ $\sqrt{64} + \sqrt[3]{x}$ = 12

⇒ 8 + $\sqrt[3]{x}$ = 12

⇒ $\sqrt[3]{x}$ = 12 – 8

⇒ $\sqrt[3]{x}$ = 4

⇒ $x = 4^3 = 64$

So, 64 is the missing number in the given figure. Hence, the **first option** is correct.

Q. 89 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

5	7	100
8	9	181
11	10	?

Option 1:
260

Option 2:
244

Option 3:
255

Option 4:
265

Correct Answer:
265

Solution:
The pattern is as follows –
(First number)^2 + (Second number)^2 + 2(First number + Second number) + 2 = Third number
First row: $(5)^2 + (7)^2 + 2(5 + 7) + 2 = 25 + 49 + 24 + 2 = 100$
Second row: $(8)^2 + (9)^2 + 2(8 + 9) + 2 = 64 + 81 + 34 + 2 = 181$
Third row: $(11)^2 + (10)^2 + 2(11 + 10) + 2 = 121 + 100 + 42 + 2 = 265$

So, the required number in the third row is 265. Hence, the **fourth option** is correct.

Q. 90 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

4	3	6
3	5	3
337	706	?

Option 1:
895

Option 2:
1123

Option 3:
1456

Option 4:
1377

Correct Answer:
1377

Solution:
Add power 4 of the number given in the first row and second row to get the number of the third row –

In the first column: $(4)^4 + (3)^4 = 256 + 81 = 337$
In the second column: $(3)^4 + (5)^4 = 81 + 625 = 706$
Similarly, follow the same pattern in the third column: $(6)^4 + (3)^4 = 1296 + 81 = 1377$

So, the required number is 1377. Hence, the **fourth option** is correct.

Q. 91 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

18	21	12
7	15	11
175	540	?

Option 1:
273

Option 2:
150

Option 3:
253

Option 4:
303

Correct Answer:
253

Solution:
Add the square of row two with the multiplication of row one and row two, to get the third number –

In column one: $18 \times 7 + 7^2 = 126 + 49 = 175$
In column two: $21 \times 15 + 15^2 = 315 + 225 = 540$
Similarly, follow the same pattern in column three →
$12 \times 11 + 11^2 = 132 + 121 = 253$

So, the required missing number in the matrix is 253. Hence, the **third option** is correct.

Q. 92 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.
55 63 ?
48 58 40
49 25 49

Option 1:
58

Option 2:
51

Option 3:
47

Option 4:
49

Correct Answer:
47

Solution:
Given:
55 63 ?
48 58 40
49 25 49

Solve according to the columns. In each column subtract the second number from the first number and the result is squared to obtain the third number.
First column: 55 – 48 = 7; 7^2 = 49

Second column: 63 – 58 = 5; 5^2 = 25
Similarly, follow the same pattern for the third column: ? – 40 = 7; 49 is the square of 7
? – 40 = 7; ? = 7 + 40 = 47

So, the required number in the third column is 47. Hence, the **third option** is correct.

Q. 93 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.
15 12 81
17 14 93
15 11 ?

Option 1:
104

Option 2:
113

Option 3:
97

Option 4:
181

Correct Answer:
104

Solution:

Given:
15 12 81
17 14 93
15 11 ?

Solve according to rows, in each row the sum of the first and the second numbers is multiplied by the result of the subtraction of the second number from the first number to obtain the third number.
First row: (15 + 12) × (15 – 12) = 27 × 3 = 81
Second row: (17 + 14) × (17 – 14) = 31 × 3 = 93
Similarly, Third row: (15 + 11) × (15 – 11) = 26 × 4 = 104

So, the required number is 104. Hence, the **first option** is correct.

Q. 94 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

12 15 ?

8 7 11

80 176 240

Option 1:
27

Option 2:
19

Option 3:
22

Option 4:
18

Correct Answer:
19

Solution:
Given:
12 15 ?
8 7 11
80 176 240

Solve the matrix according to the columns. In each column, the difference between the squares of the first and the second number is equal to the third number.

First column: $(12)^2 - (8)^2 = 144 - 64 = 80$
Second column: $(15)^2 - (7)^2 = 225 - 49 = 176$
Similarly, follow the same pattern for the third column: $(?)^2 - (11)^2 = 240$; $(?)^2 = 240 + 121 = 361$
$(?)^2 = 361$; ? = 19

So, the required number is 19. Hence, the **second option** is correct.

Q. 95 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

4 7 11

5 3 4

? 34 75

Option 1:
29

Option 2:
129

Option 3:
41

Option 4:
138

Correct Answer:
129

Solution:
Given:
4 7 11

5 3 4

? 34 75

Solve according to the column. In each column, the first number is added to the cube of the second number to obtain the third number.

Second column: $7 + (3)^3 = 7 + 27 = 34$
Third column: $11 + (4)^3 = 11 + 64 = 75$
Similarly, First column: $4 + (5)^3 = 4 + 125 = 129$

So, the required number is 129. Hence, the **second option** is correct.

Q. 96 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

14 7 196

15 6 ?

21 7 294

Option 1:
180

Option 2:
199

Option 3:
253

Option 4:
144

Correct Answer:
180

Solution:
Given:
14 7 196
15 6 ?
21 7 294

Solve according to row wise. In each row multiply the first and the second number and the resultant is doubled to obtain the third number.

Row I: 14 7 196→(14 × 7) × 2 = 98 × 2 = 196
Row II: 15 6 ?→(15 × 6) × 2 = 90 × 2 = 180
Row III: 21 7 294→(21 × 7) × 2 = 147 × 2 = 294

So, the required number is 180. Hence, the **first option** is correct.

Q. 97 **Directions:** Find the missing number from the given responses.

8	7	9
4	5	6
9	6	?
288	210	162

Option 1:
4

Option 2:
8

Option 3:
7

Option 4:
3

Correct Answer:
3

Solution:
Given:

8	7	9
4	5	6
9	6	?
288	210	162

The pattern can be observed running vertically down the columns.
Column 1: 8 × 4 × 9 = 288
Column 2: 7 × 5 × 6 = 210
Column 3: 9 × 6 × ? = 162
⇒ 54 × ? = 162 ⇒ ? = 162 ÷ 54 = 3

Hence, the **fourth option** is correct.

Q. 98 **Directions:** Find the missing number from the given responses.

4	8	2
3	2	2
5	8	?
60	128	68

Option 1:
17

Option 2:
13

Option 3:
19

Option 4:
15

Correct Answer:
17

Solution:
Given:

4	8	2
3	2	2
5	8	?
60	128	68

The pattern can be observed running vertically down the columns.
Column 1: $4 \times 3 \times 5 = 60$
Column 2: $8 \times 2 \times 8 = 128$
Column 3: $2 \times 2 \times ? = 68$
$\Rightarrow 4 \times ? = 68 \Rightarrow ? = 68 \div 4 = 17$

Hence, the **first option** is correct.

Q. 99 **Directions:** Find the missing number from the given responses.

7	3	10
3	4	7
2	7	?
42	84	140

Option 1:
2

Option 2:
17

Option 3:
34

Option 4:
9

Correct Answer:
2

Solution:
Given:

7	3	10
3	4	7
2	7	?

42	84	140

The pattern can be observed running vertically down in the columns.

Column 1: 7 × 3 × 2 = 42

Column 2: 3 × 4 × 7 = 84

Column 3: 10 × 7 × (?) = 140

⇒ 70 × (?) = 140

⇒ (?) = 140 ÷ 70

⇒ (?) = 2

So, 2 is the missing term in the series. Hence, the **first option** is correct.

Q. 100 **Directions:** Select the missing number from the given responses.

7	14	19
6	12	17
5	10	?

Option 1:
20

Option 2:
18

Option 3:
15

Option 4:
16

Correct Answer:
15

Solution:
The second row is the twice of the first row and the third row is five added to the twice of the second row.

In the first row; 7 × 2 = 14→14 + 5 = 19
In the second row; 6 × 2 = 12→12 + 5 = 17
Similarly, in the third row; 5 × 2 = 10→10 + 5 = 15

So, the missing number is 15. Hence, the **third option** is correct.

Q. 101 **Directions:** Select the missing number from the given responses.

92	70	48
64	53	42
52	45	?

Option 1:
36

Option 2:
40

Option 3:
38

Option 4:
42

Correct Answer:
38

Solution:
The difference between the first and second rows is the same as that of the difference between the second and third rows.

In the first row; 92 – 70 = 22→70 – 48 = 22
In the second row; 64 – 53 = 11→53 – 42 = 11
Similarly, in the third row; 52 – 45 = 7→45 – 7 = 38

So, the missing number is 38. Hence, the **third option** is correct.

Q. 102 **Directions:** Select the missing number from the given responses.

25	49	16
36	81	64
11	16	?

Option 1:
12

Option 2:
20

Option 3:
18

Option 4:
13

Correct Answer:
12

Solution:
The third column is the sum of the square root of the first and the second column.

In the first column; $25 = (5)^2$; $36 = (6)^2 \rightarrow 5 + 6 = 11$
In the second column; $49 = (7)^2$; $81 = (9)^2 \rightarrow 7 + 9 = 16$
Similarly, In the third column; $16 = (4)^2$; $64 = (8)^2 \rightarrow 4 + 8 = 12$

So, the missing number is 12. Hence, the **first option** is correct.

Q. 103 **Directions:** In the following question, select the number that can be placed at the sign of the question mark (?) from the given alternatives.

2	5	4
3	4	3
7	6	2
15	18	?

Option 1:
10

Option 2:
11

Option 3:
12

Option 4:
13

Correct Answer:
12

Solution:
The sum of the first three rows is added to three to get the fourth row.|

Like, in the first column→(2 + 3 + 7) + 3 = 15
And, in the second column→(5 + 4 + 6) + 3 = 18
Similarly, in the third column→(4 + 3 + 2) + 3 = 12

So, the missing number is 12. Hence, the **third option** is correct.

Q. 104

Directions: In the following question, Select the number that can be placed at the sign of the question mark (?) from the given alternatives.

1	2	3	4
2	3	4	5
3	4	5	6
6	9	12	?

Option 1:
14

Option 2:
15

Option 3:
17

Option 4:
20

Correct Answer:
15

Solution:
The pattern followed is that the fourth row is the sum of the other three rows –

Like, in the first column→1 + 2 + 3 = 6
And, in the second column→2 + 3 + 4 = 9
And, in the third column→3 + 4 + 5 = 12
Similarly, in the fourth column→4 + 5 + 6 = 15

So, 15 is the missing number. Hence, the **second option** is correct.

Q. 105 **Directions:** In the following question, Select the number that can be placed at the sign of the question mark (?) from the given alternatives.

4	5	6
3	4	2
5	3	3
23	19	?

Option 1:
14

Option 2:
16

Option 3:
20

Option 4:
24

Correct Answer:
20

Solution:
The pattern followed is that the second row is added to the product of the first and third to obtain the fourth row.

Like, in column one; 4 × 5 + 3 = 23
And, in column two; 5 × 3 + 4 = 19
Similarly, in column three; 6 × 3 + 2 = 20

So, the missing number is 20. Hence the **third option** is correct.

Q. 106 **Directions:** Find out the missing number.

8	9	9
6	7	8
9	11	?
39	52	59

Option 1:
10

Option 2:
11

Option 3:
12

Option 4:
13

Correct Answer:
13

Solution:
Given:

8	9	9
6	7	8
9	11	?
39	52	59

The pattern can be observed running vertically down in the columns.
Column 1: (8 × 6) – 9 = 48 – 9 = 39
Column 2: (9 × 7) – 11 = 63 – 11 = 52
Column 3: (9 × 8) – (?) = 59
⇒ 72 – (?) = 59
⇒ (?) = 72 – 59
⇒ (?) = 13

So, 13 is the missing term. Hence, the **fourth option** is correct.

Q. 107 **Directions:** Find the missing number from the given responses in each of the following questions.

7	8	6
6	5	9
12	13	?
504	520	486

Option 1:
7

Option 2:
12

Option 3:
8

Option 4:
9

Correct Answer:
9

Solution:
Here, the multiplication of the first three rows equals the fourth row of the given matrix.

In column one: 7 × 6 × 12 = 504
In column two: 8 × 5 × 13 = 520
Similarly in column three: 6 × 9 × ? = 486; ? = 486/54; ? = 9

So, the missing number is 9. Hence the fourth option is correct.

Q. 108 **Directions:** Find the missing number from the given responses in each of the following questions.

5	8	9
7	6	6
9	7	?
21	21	21

Option 1:
7

Option 2:
6

Option 3:
5

Option 4:
4

Correct Answer:
6

Solution:
Here, add the first three rows to get the required missing number.

In column one: 5 + 7 + 9 = 21
In column two: 8 + 6 + 7 = 21
Similarly, in column three: 9 + 6 + ? = 21; ? = 6

So, 6 is the missing number. Hence, the **second option** is correct.

Q. 109 **Directions:** Find out the missing number.

8	9	7
4	5	6
2	4	?
64	180	294

Option 1:
6

Option 2:
7

Option 3:
8

Option 4:
9

Correct Answer:
7

Solution:
Given:

8	9	7
4	5	6
2	4	?
64	180	294

The pattern can be observed running vertically down in the columns.
Column 1: 8 × 4 × 2 = 64
Column 2: 9 × 5 × 4 = 180
Column 3: 7 × 6 × (?) = 294
⇒ 42 × (?) = 294
⇒ (?) = 294 ÷ 42
⇒ (?) = 7

So, 7 is the missing term. Hence, the **second option** is correct.

Q. 110 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

7	9	63
6	8	48
5	7	?

Option 1:
28

Option 2:
35

Option 3:
42

Option 4:
49

Correct Answer:
35

Solution:
Given:

7	9	63
6	8	48
5	7	?

The pattern can be observed running horizontally along the rows.
First row→7 × 9 = 63
Second row→6 × 8 = 48
Similarly, follow the same pattern for the third row→5 × 7 = 35

So, 35 is the missing number in the figure. Hence, the **second option** is correct.

Q. 111 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

60	20	10
90	30	15
36	12	?

Option 1:
6

Option 2:
8

Option 3:
5

Option 4:
4

Correct Answer:
6

Solution:
In each row, divide the first number by 3 and the second number by 2, to get the second and third numbers respectively –
In the first column→60 ÷ 3 = 20 and 20 ÷ 2 = 10
In the second column→90 ÷ 3 = 30 and 30 ÷ 2 = 15
Similarly, follow the same pattern in the third column→36 ÷ 3 = 12 and 12 ÷ 2 = 6

So, 6 is the missing number in the given figure. Hence, the **first option** is correct.

Q. 112 **Directions:** In the following question, select the missing number from the given alternatives.

24	30	19
5	7	18
9	1	?

Option 1:
4

Option 2:
1

Option 3:
5

Option 4:
6

Correct Answer:
1

Solution:
Given:

24	30	19
5	7	18
9	1	?

Here, the sum of the numbers in each column is equal to 38 –
In column one: 24 + 5 + 9 = 38
In column two: 30 + 7 + 1 = 38
Similarly, follow the same pattern in column three: 38 – (19 + 18) = 38 – 37 = 1

So, the required missing number in the matrix is 1. Hence, the **second option** is correct.

Q. 113 **Directions:** In the following question, a series is given with one term missing. Choose the correct alternative from the given ones that will complete the series**.**

6	8	12
7	9	14
85	145	?

Option 1:
175

Option 2:
450

Option 3:
340

Option 4:
740

Correct Answer:
340

Solution:
Given:

6	8	12
7	9	14
85	145	?

The sum of the square of the number of row one and row two is equal to the row three –
In column one: $6^2 + 7^2 = 36 + 49 = 85$
In column two: $8^2 + 9^2 = 64 + 81 = 145$
In column three: $12^2 + 14^2 = 144 + 196 = 340$

So, the required missing number in the matrix is 340. Hence, the **third option** is correct.

Q. 114 **Directions:** In the following question, select the missing number from the given responses.

	18			20			8	
16		20	18		22	9		?

Option 1:
6

Option 2:
7

Option 3:
10

Option 4:
11

Correct Answer:
7

Solution:
Given:

	18			20			8	
16		20	18		22	9		?

The pattern followed is as follows –

In the first part; 16 + 20 = 36; 36 ÷ 2 = 18

In the second part; 18 + 22 = 40; 40 ÷ 2 = 20

In the third part; (9 + (?)) ÷ 2 = 8

⇒ 9 + (?) = 8 × 2

⇒ 9 + (?) = 16

⇒ (?) = 16 – 9 = 7

So, the missing number is 7. Hence, the **second option** is correct.

Q. 115 **Directions:** In the following question, select the missing number from the given responses.

2		4	5		3
3	3	3	6	?	6
1		2	1		6

Option 1:
5

Option 2:
2

Option 3:
3

Option 4:
1

Correct Answer:
3

Solution:
Given:

2		4	5		3
3	3	3	6	?	6
1		2	1		6

The pattern followed is as follows –

In the first part; 2 + 3 + 1 = 6; 4 + 3 + 2 = 9→9 – 6 = 3

In the second part; 5 + 6 + 1 = 12; 3 + 6 + 6 = 15→15 – 12 = 3

So, the missing number is 3. Hence, the **third option** is correct.

Q. 116 **Directions:** In the following question, select the missing number from the given responses.

1	3	7
2	4	4
4	5	9
3	2	3
50	70	?

Option 1:
23

Option 2:
115

Option 3:
118

Option 4:
220

Correct Answer:
115

Solution:
Here, the sum of the first four rows is multiplied by 5 which is equal to the fifth row.

Like, in the first column; (1 + 2 + 4 + 3) × 5 = 50
And, in the second column; (3 + 4 + 5 + 2) × 5 = 70
Similarly, in the third column; (7 + 4 + 9 + 3) × 5 = 115

So, the missing number is 115. Hence, the **second option** is correct.

Q. 117 **Directions:** In the following question, select the missing number from the given responses.

13	9	24
11	?	6
16	20	10

Option 1:
11

Option 2:
20

Option 3:
19

Option 4:
16

Correct Answer:
11

Solution:
Here, the sum of each column is equal to 40.

Like, in the first column; 13 + 11 + 16 =.40
And, in the third column; 24 + 6 + 10 = 40
Similarly, in the second column; 9 + ? + 20 = 40; ? = 11

So, the missing number is 11. Hence, the **first option** is correct.

Q. 118 **Directions:** In the following question, select the missing number from the given responses.

9	30	21
6	?	14
12	40	28

Option 1:
20

Option 2:
33

Option 3:
37

Option 4:
70

Correct Answer:
20

Solution:
Here, the difference between the second column and the first column is equal to the third column.

Like, in the first row; 30 – 9 = 21
And, in the third row; 40 – 12 = 28
Similarly, in the third row; ? – 6 = 14; ? = 20

So, the missing number is 20. Hence, the **first option** is correct.

Q. 119 **Directions:** Find the missing number.

3	4	64
2	3	9
3	2	8
9	2	?

Option 1:
216

Option 2:
512

Option 3:
128

Option 4:
1024

Correct Answer:
512

Solution:
Here, use the first column's number as the power to the second column's number to get the third column's number.

Like, in the first row→$4^3 = 64$
In the second row→$3^2 = 9$
In the third row→$2^3 = 8$
Similarly, in the fourth row→$2^9 = 512$

So, the missing number is 512. Hence, the **second option** is correct.

Q. 120 **Directions:** Find the missing number from the given responses.

9	5	7
4	7	?
7	8	3
252	280	126

Option 1:
8

Option 2:
3

Option 3:
2

Option 4:
6

Correct Answer:
6

Solution:
Here, multiply the numbers given in row one, row two, and row three to get the number in row four.

Like, in the first column→9 × 4 × 7 = 252
And, in the second column→5 × 7 × 8 = 280
Similarly, in the third column→7 × ? × 3 = 126; ? = 6

So, the missing number is 6. Hence, the **fourth option** is correct.

Q. 121 **Directions:** Find the missing numbers from the given responses.

14	19	12
13	15	?
18	?	16

Option 1:
11, 17

Option 2:
17, 11

Option 3:
17, 19

Option 4:
19, 17

Correct Answer:
11, 17

Solution:
Here, the sum of each column is equal to 45.

Like, in the first column→14 + 13 + 18 = 45
And, in the second column→19 + 15 + ? = 45; ? = 11
Similarly, in the third column→12 + ? + 16 = 45; ? = 17

So, the missing numbers are 11 and 17. Hence, the **first option** is correct.

Q. 122 **Directions:** Find the missing number from the given responses.

5	7	9
4	8	2
8	6	?
160	336	108

Option 1:
4

Option 2:
7

Option 3:
6

Option 4:
8

Correct Answer:
6

Solution:

Here, multiply the numbers given in rows one, two, and three to get the number for row four.

Like, in the first column→5 × 4 × 8 = 160
And, in the second column→7 × 8 × 6 = 336
Similarly, in the third column→9 × 2 × ? = 108; ? = 6

So, the missing number is 6. Hence, the **third option** is correct.

Q. 123 **Directions:** Find the missing number from the given responses.

6	7	4
5	3	5
7	?	6
3	3	6

Option 1:
7

Option 2:
3

Option 3:
8

Option 4:
5

Correct Answer:
8

Solution:
Here, the sum of numbers given in each column is equal to 21.

Like, in the first column→6 + 5 + 7 + 3 = 21
And, in the third column→4 + 5 + 6 + 6 = 21
Similarly, in the second column→7 + 3 + ? + 3 = 21, ? = 8

So, the missing number is 8. Hence, the **third option** is correct.

Q. 124 **Directions:** Select the missing number from the given responses.

6	5	26
4	7	32
?	9	44

Option 1:
8

Option 2:
31

Option 3:
32

Option 4:
36

Correct Answer:
8

Solution:
Given:

6	5	26
4	7	32
?	9	44

The pattern can be observed running horizontally along the rows.
First row: 26 – 6 = 20; 20 ÷ 4 = 5
Second row: 32 – 4 = 28; 28 ÷ 4 = 7
Third row: {44 – (?)} ÷ 4 = 9
⇒ 44 – (?) = 9 × 4
⇒ 44 – (?) = 36
⇒ (?) = 44 – 36
⇒ (?) = 8

So, the missing number is 8. Hence, the **first option** is correct.

Q. 125 **Directions:** Find out the numbers that would fit in the second-row and third-row middle and last blank spaces (?) respectively.

18	23	16
17	19	?
22	?	?

Option 1:
26, 24, 25

Option 2:
15, 21, 20

Option 3:
21, 15, 20

Option 4:
25, 24, 26

Correct Answer:
15, 21, 20

Solution:
Given:

18	23	16
17	19	?
22	?	?

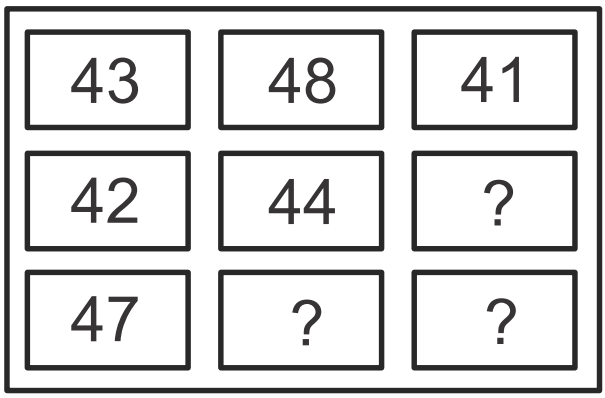
Here, the sum of the numbers in a row and the sum of the numbers in a column are equal to 57.

In the first row; 18 + 23 + 16 = 57
In the second row; 17 + 19 + (?) = 57 ⇒ (?) = 21

Now, in the first column; 18 + 17 + 22 = 57
In the second column; 23 + 19 + (?) = 57 ⇒ (?) = 15
Similarly, in the third column; 16 + 21 + (?) = 57 ⇒ (?) = 20

So, from the above 15, 21, and 20 are the required numbers of the given figure. Hence, the **second option** is correct.

Q. 126 **Directions:** In the following question, select the missing numbers from the given responses.



Option 1:
49, 45, 46

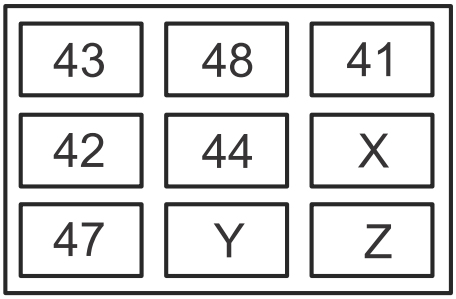
Option 2:
45, 49, 46

Option 3:
40, 48, 46

Option 4:
46, 40, 45

Correct Answer:
46, 40, 45

Solution:
Let the missing numbers in a table be X, Y, Z.



In the given table, the sum of all the numbers in a row and in a column is equal, i.e., 132.

Row 1→43 + 48 + 41 = 132
Column 1→43 + 42 + 47 = 132
Row 2→42 + 44 + X = 132
⇒ X = 132 – 44 – 42 = 46
⇒ X = 46
Column 2→48 + 44 + Y = 132
⇒ Y = 132 – 48 – 44 = 40
⇒ Y = 40
Row 3→41 + X + Z = 132
⇒ 41 + 46 + Z = 132
⇒ Z = 132 – 41 – 46 = 45
⇒ Y = 45

So, 46, 40, and 45 are the missing numbers in the given figure. Hence, the **fourth option** is correct.

Q. 127 **Directions:** Find the missing number from the given responses.

3	4	5
2	3	4
1	2	3
14	29	?

Option 1:
30

Option 2:
40

Option 3:
32

Option 4:
50

Correct Answer:
50

Solution:
Here, the fourth number in each column is the sum of the squares of the first three numbers.

First column: $3^2 + 2^2 + 1^2 = 9 + 4 + 1 = 14$
Second column: $4^2 + 3^2 + 2^2 = 16 + 9 + 4 = 29$
Third column: $5^2 + 4^2 + 3^2 = 25 + 16 + 9 = 50$

So, the missing number is 50. Hence, the **fourth option** is correct.

Q. 128 **Directions:** Find the missing numbers from the given responses.

113	118	?
112	?	116
?	110	115

Option 1:
109; 111; 117

Option 2:
114; 111; 117

Option 3:
111; 114; 117

Option 4:
117; 109; 111

Correct Answer:
111; 114; 117

Solution:
Let the missing numbers in a table be a; b; c.

113	118	a
112	b	116
c	110	115

In a given table, the sum of all the numbers in a row and in a column is equal i.e. 342.

In the first row→113 + 118 + a = 342
⇒ a = 342 – 113 – 118 = 111
In the second row→112 + b + 116 = 342
⇒ b = 342 – 112 – 116 = 114
Similarly, in the third row→c + 110 + 115 = 342
⇒ c = 342 – 110 – 115 = 117

So, 111; 114; and 117 are the missing numbers in the given figure.
Hence, the **third option** is correct.

Q. 129 **Directions:** In the following question, select the missing number from the given alternatives:

6	8	12
7	9	14
85	145	?

Option 1:
175

Option 2:
450

Option 3:
340

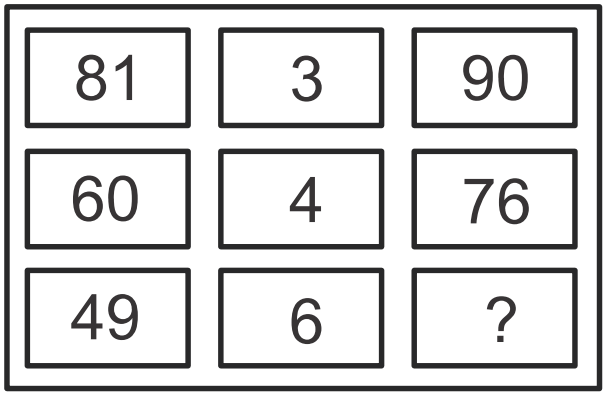
Option 4:
740

Correct Answer:
340

Solution:
Here, in each column, the third number is the sum of the squares of the first two numbers
In the first column: $6^2 + 7^2 = 36 + 49 = 85$
In the second column: $8^2 + 9^2 = 64 + 81 = 145$
In the third column: $12^2 + 14^2 = 144 + 196 = 340$

So, the missing number is 340. Hence, the **third option** is correct.

Q. 130 **Directions:** In the following question, select the missing number from the given alternatives.



Option 1:
78

Option 2:
80

Option 3:
85

Option 4:
75

Correct Answer:
85

Solution:
In a row, add the first number in the square of the second number to get the third number.

In the first row→$81 + 3^2 = 81 + 9 = 90$
In the second row→ $60 + 4^2 = 60 + 16 = 76$
Similarly, in the third row→$49 + 6^2 = 49 + 36 = 85$

So, 85 is the missing number in the given figure. Hence, the **third option** is correct.

Q. 131 **Directions:** In the following question, select the missing number from the given alternatives:

17	15	13
8	?	11
353	274	290

Option 1:
4

Option 2:
8

Option 3:
9

Option 4:
7

Correct Answer:
7

Solution:
Here, in each column, the sum of the squares of the first and the second numbers is equal to the third number.

In Column one: $17^2 + 8^2 = 289 + 64 = 353$
In Column three: $13^2 + 11^2 = 169 + 121 = 290$
Similarly, in Column two: $15^2 + ?^2 \Rightarrow 225 + ?^2 = 274 \Rightarrow ? = 7$

So, the missing number is 7. Hence, the **fourth option** is correct.

Q. 132 **Directions:** In the following question, select the missing number from the given alternatives.

6	16	?
7	23	17
8	9	30

Option 1:
27

Option 2:
25

Option 3:
12

Option 4:
14

Correct Answer:
25

Solution:
Given:

6	**16**	**?**
7	**23**	**17**
8	**9**	**30**

Adding the numbers in each row,
Row 2: 7 + 23 + 17 = 47
Row 3: 8 + 9 + 30 = 47
Similarly, for **Row 1:** 6 + 16 + (?) = 47
⇒ (?) = 47 – 22
⇒ (?) = 25

So, 25 is the missing number. Hence, the **second option** is correct.

Q. 133 **Directions:** In the following question, select the missing number from the given alternatives:

?	12	9
36	108	72
9	9	8

Option 1:
0

Option 2:
4

Option 3:
2

Option 4:
6

Correct Answer:
4

Solution:
Here, in each column multiply the first and the third number to obtain the second number.

In column two: 12 × 9 = 108
In column three: 9 × 8 = 72
Similarly in column one: ? × 9 = 36 ⇒ ? = 36 ÷ 9 ⇒ 4

So, the missing number is 4. Hence the **second option** is correct.

Q. 134 **Directions:** In the following question, select the missing number from the given alternatives:

36	86	35
72	59	78
56	45	?
52	100	100

Option 1:
11

Option 2:
13

Option 3:
12

Option 4:
14

Correct Answer:
13

Solution:
Here, in each column subtract the third number from the sum of the first and the second number to obtain the fourth number.

In column one: 36 + 72 – 56 = 52
In column two: 86 + 59 – 45 = 100
Similarly in column three: 35 + 78 – ? = 100 ⇒ ? = 113 – 100 ⇒ 13

So, the missing number is 13. Hence, the **second option** is correct.

Q. 135 **Directions:** In the following question, select the missing number from the given alternatives:

6	10	9
7	2	1
3	4	?

Option 1:
9

Option 2:
8

Option 3:
6

Option 4:
7

Correct Answer:
6

Solution:
Given:

6	10	9
7	2	1
3	4	?

Adding the numbers in each column,
Column 1: 6 + 7 + 3 = 16
Column 2: 10 + 2 + 4 = 16
Similarly for **Column 3:** 9 + 1 + ? = 16 ⇒ ? = 16 – 1 – 9 = 6

So, 6 is the missing number. Hence, the **third option** is correct.

Q. 136 **Directions:** In the following question, select the number that can be placed at the sign of the question mark (?) from the given alternatives.

3	10	6	186
9	5	3	138
5	7	1	36
3	2	5	?

Option 1:
35

Option 2:
42

Option 3:
45

Option 4:
95

Correct Answer:
35

Solution:
Given:

3	10	6	186
9	5	3	138
5	7	1	36
3	2	5	?

In each row, add 1 to the product of the first two numbers, then multiply the result by the third number to get the fourth number.
Row 1: $(3 \times 10) + 1 = 30 + 1 = 31 \rightarrow 31 \times 6 = 186$
Row 2: $(9 \times 5) + 1 = 45 + 1 = 46 \rightarrow 46 \times 3 = 138$
Row 3: $(5 \times 7) + 1 = 35 + 1 = 36 \rightarrow 36 \times 1 = 36$
Row 4: $(3 \times 2) + 1 = 6 + 1 = 7 \rightarrow 7 \times 5 = 35$

So, 35 is the missing number. Hence, the **first option** is correct.

Q. 137 **Directions:** In the following question, select the number that can be placed at the sign of the question mark (?) from the given alternatives.

2	4	1
5	3	5
7	2	6
39	17	?

Option 1:
11

Option 2:
31

Option 3:
32

Option 4:
37

Correct Answer:
31

Solution:
Given:

2	4	1
5	3	5
7	2	6
39	17	?

In each column, the fourth number is the sum of the square of the second number and the product of the first and the third numbers.

Column 1: $(2 \times 7) + 5^2 = 14 + 25 = 39$
Column 2: $(4 \times 2) + 3^2 = 8 + 9 = 17$
Column 3: $(1 \times 6) + 5^2 = 6 + 25 = 31$

So, 31 is the missing number. Hence, the **second option** is correct.

Q. 138 **Directions:** Select the missing number from the given responses.

21	27	29
?	96	142
57	69	113

Option 1:
46

Option 2:
69

Option 3:
29

Option 4:
78

Correct Answer:
78

Solution:
Given:

21	27	29
?	96	142
57	69	113

In each column, the third number is the difference between the first two numbers.
Column 2: 96 – 27 = 69
Column 3: 142 – 29 = 113
Similarly, **Column 1:** (?) – 21 = 57
⇒ (?) = 57 + 21
⇒ (?) = 78

So, 78 is the missing number. Hence, the **fourth option** is correct.

Q. 139 **Directions:** Select the missing number from the given responses.

111	314	205
34	39	102
?	275	103

Option 1:
172

Option 2:
75

Option 3:
77

Option 4:
170

Correct Answer:
77

Solution:
Given:

111	314	205
34	39	102
?	275	103

In each column, the third number is the difference of the first two numbers.
Column 2: 314 – 39 = 275
Column 3: 205 – 102 = 103
Similarly, **Column 1:** 111 – 34 = 77

So, 77 is the missing number. Hence, the **third option** is correct.

Q. 140 **Directions:** Select the missing number from the given responses.

134	34	100
117	86	31
87	?	64

Option 1:
120

Option 2:
23

Option 3:
55

Option 4:
30

Correct Answer:
23

Solution:
Given:

134	34	100
117	86	31
87	?	64

In each row, the third number is the difference between the first two.

Row 1: 134 – 34 = 100

Row 2: 117 – 86 = 31

Row 3: 87 – (?) = 64

⇒ (?) = 87 – 64

⇒ (?) = 23

So, 23 is the missing number. Hence, the **second option** is correct.

Q. 141 **Directions:** Select the missing number from the given responses.

23	?	12
6	13	7
138	117	84

Option 1:
9

Option 2:
13

Option 3:
17

Option 4:
15

Correct Answer:
9

Solution:
Given:

23	?	12
6	13	7
138	117	84

In each column multiply the first two numbers to obtain the third number.
Column 1: 23 × 6 = 138
Column 2: (?) × 13 = 117
⇒ (?) = 117 ÷ 13
⇒ (?) = 9
Column 3: 12 × 7 = 84

So, 9 is the missing number. Hence, the **first option** is correct.

Q. 142 **Directions:** Select the missing number from the given responses.

16	17	28
21	23	27
?	391	756

Option 1:
377

Option 2:
351

Option 3:
336

Option 4:
306

Correct Answer:
336

Solution:
Given:

16	17	28
21	23	27
?	391	756

In each column multiply the first two numbers to obtain the third number.
Column 2: 23 × 17 = 391
Column 3: 28 × 27 = 756
Similarly, **Column 1:** 16 × 21 = 336

So, 336 is the missing number. Hence, the **third option** is correct.

Q. 143

Directions: Study the given pattern carefully and select the number that can replace the question mark (?) in it. (NOTE; Operation should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13- operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

5	14	3
3	24	7
9	30	?

Option 1:
7

Option 2:
5

Option 3:
13

Option 4:
9

Correct Answer:
7

Solution:
Subtract the number of column 2 from column one and divide the resultant by 3 to get the required missing number –

In the first row: (14 – 5) ÷ 3 = 9 ÷ 3 = 3
In the second row: (24 – 3) ÷ 3 = 21 ÷ 3 = 7
Similarly, follow the same in the third row: (30 – 9) ÷ 3 = 21 ÷ 3 = 7

Therefore, the required missing number is 7. Hence, the **first option** is correct.

Q. 144 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

16	15	35
12	8	33
8	17	?

(NOTE: Operations should be performed on the whole numbers, without breaking down the number into its constituent digits. For example, 13 - Operations on 13 such as adding/subtracting/multiplying, etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

Option 1:
31

Option 2:
27

Option 3:
25

Option 4:
30

Correct Answer:
27

Solution:
Add the number given in column one and column two and add 4, 3, and 2 to the resultant to get the third column –

In row one: 16 + 15 = 31; 31 + 4 = 35
In row two: 12 + 18 = 30; 30 + 3 = 33
Similarly, follow the same pattern in row two: 8 + 17 = 25; 25 + 2 = 27

So, 27 is the required number. Hence, the **second option** is correct.

Q. 145 **Directions:** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

16	4	4
30	5	15
8	2	?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g., 13 – operations on to 13 such as adding/subtracting/multiplying, etc. 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

Option 1:
2

Option 2:
8

Option 3:
6

Option 4:
4

Correct Answer:
2

Solution:
Given:

16	4	4
30	5	15
8	2	?

Here, the number in the second column is multiplied by 3, and then the number of the third column is added to the resultant to obtain the number of the first column.

Like, In the first row, $4 + (4 \times 3) = 4 + 12 = 16$
And, In the second row, $15 + (5 \times 3) = 15 + 15 = 30$
Similarly, In the third row, $x + (2 \times 3) = 8$; $x + 6 = 8$; $x = 8 - 6 = 2$

So, the missing number is 2. Hence, the **first option** is correct.