

Pattern Puzzles – Pack 36

Puzzle 1. What comes next in the sequence?

2	9	3	11	10	11	11	14	18	13	19	17	?
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- A) 20 B) 27 C) 26 D) 15

Puzzle 2. What number replaces the question mark in the grid?

1	2	6
3	4	9
11	15	?

- A) 45 B) 39 C) 38 D) 31

Puzzle 3. What number replaces the question mark in the grid?

2	2	2
7	7	2
1	6	?

- A) 17 B) 18 C) 13 D) 11

Puzzle 4. What number replaces the question mark in the grid?

2	1	5
7	6	6
1	8	?

- A) 15 B) 10 C) 4 D) 11

Puzzle 5. What comes next in the sequence?

8	40	140	374	832	1628	2900	4810	?
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- A) 7520 B) 7544 C) 7568 D) 4810

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Puzzle 6. What comes next in the sequence?

5	6	5	17	29	52	99	181	?
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- A) 332 B) 364 C) 334 D) 333

Puzzle 7. What number replaces the question mark in the grid?

1	3	13
14	20	16
13	13	?

- A) 18 B) 17 C) 16 D) 7

Puzzle 8. What number replaces the question mark in the grid?

4	3	18
6	1	29
1	3	?

- A) 34 B) 32 C) 46 D) 45

Puzzle 9. What comes next in the sequence?

12	15	4	4	20	19	12	9	28	23	20	14	?
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- A) 37 B) 27 C) 36 D) 32

Puzzle 10. What comes next in the sequence?

7	38	143	394	887	1742	3103	5138	?
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- A) 5138 B) 8039 C) 8063 D) 8015

Answer Key

1. **C) 26**

Four interleaved arithmetic series (period 4):

6. **D) 333**

Rule: $a(n) = a(n-1) + a(n-2) + a(n-3) + 1$.

2. **C) 38**

Row sums are perfect squares: 9, 16, 64.

7. **C) 16**

Column sums are triangular numbers: 28, 36, 45.

3. **A) 17**

Column sums are triangular numbers: 10, 15, 21.

8. **D) 45**

Row sums are perfect squares: 25, 36, 49.

4. **B) 10**

Column sums are triangular numbers: 10, 15, 21.

9. **C) 36**

Four interleaved arithmetic series (period 4):

5. **B) 7544**

4th differences are all 24 (quartic sequence).

10. **B) 8039**

4th differences are all 24 (quartic sequence).