

Pattern Puzzles – Pack 38

Puzzle 1. What comes next in the sequence?

5	4	6	18	31	58	110	202	?
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- A) 322 B) 373 C) 370 D) 376

Puzzle 2. What comes next in the sequence?

4	36	144	400	900	1764	3136	5184	?
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- A) 8100 B) 5184 C) 8124 D) 8076

Puzzle 3. What comes next in the sequence?

3	3	4	13	23	43	82	151	?
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- A) 279 B) 276 C) 282 D) 247

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

4	2	19
7	1	28
6	6	?

- A) 37 B) 26 C) 38 D) 24

Puzzle 5. What comes next in the sequence?

5	2	4	13	21	40	76	139	?
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- A) 257 B) 269 C) 259 D) 255

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Puzzle 6. What number replaces the question mark in the grid?

1	2	6
2	2	12
6	1	?

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

2	8	3
2	13	29
17	7	?

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Puzzle 8. What comes next in the sequence?

2	6	6	10	6	11	12	15	10	16	18	20	?
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Puzzle 9. What number replaces the question mark in the grid?

1	1	7
2	5	18
7	2	?

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Puzzle 10. What number replaces the question mark in the grid?

3	3	4
6	2	7
1	10	?

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Answer Key

1. **B) 373**

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

6. **C) 18**

Row sums are perfect squares: 9, 16, 25.

2. **A) 8100**

4th differences are all 24 (quartic sequence).

7. **D) 4**

Column sums are triangular numbers: 21, 28, 36.

3. **A) 279**

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

8. **C) 14**

Four interleaved arithmetic series (period 4):

4. **A) 37**

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

9. **D) 27**

Row sums are perfect squares: 9, 25, 36.

5. **A) 257**

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

10. **D) 10**

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