

Pattern Puzzles – Pack 11

Puzzle 1. What comes next in the sequence?

9	48	175	468	1029	1984	3483	5700	?
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|---------|---------|---------|---------|
| A) 8833 | B) 5700 | C) 8809 | D) 8857 |
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Puzzle 2. What comes next in the sequence?

8	36	130	356	804	1588	2846	4740	?
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| A) 7432 | B) 7456 | C) 7480 | D) 4740 |
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Puzzle 3. What comes next in the sequence?

4	4	4	15	26	48	92	169	?
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| A) 281 | B) 312 | C) 315 | D) 309 |
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Puzzle 4. What comes next in the sequence?

7	43	165	451	1003	1947	3433	5635	?
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| A) 5635 | B) 8727 | C) 8775 | D) 8751 |
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Puzzle 5. What comes next in the sequence?

2	6	2	13	24	42	82	151	?
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| A) 281 | B) 275 | C) 278 | D) 332 |
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Puzzle 6. What comes next in the sequence?

3	10	9	12	8	14	15	20	13	18	21	28	?
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- A) 22 B) 17 C) 18 D) 19

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

1	2	2
7	14	13
7	5	?

- A) 13 B) 10 C) 14 D) 6

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

3	1	7
2	8	12
5	6	?

- A) 3 B) 2 C) 1 D) 5

Puzzle 9. What number replaces the question mark in the grid?

7	8	21
6	7	36
16	12	?

- A) 23 B) 37 C) 21 D) 36

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

1	6	12
6	14	3
14	8	?

- A) 25 B) 22 C) 21 D) 13

Answer Key

1. **A) 8833**

4th differences are all 24 (quartic sequence).

6. **C) 18**

Four interleaved arithmetic series (period 4):

2. **B) 7456**

4th differences are all 24 (quartic sequence).

7. **A) 13**

Column sums are triangular numbers: 15, 21, 28.

3. **B) 312**

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

8. **B) 2**

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

4. **D) 8751**

4th differences are all 24 (quartic sequence).

9. **D) 36**

Row sums are perfect squares: 36, 49, 64.

5. **C) 278**

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

10. **C) 21**

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