

Pattern Puzzles – Pack 2

Puzzle 1. What comes next in the sequence?

7	34	125	346	787	1562	2809	4690	?
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- A) 7415 B) 7391 C) 7367 D) 4690

Puzzle 2. What comes next in the sequence?

4	5	2	14	24	43	84	154	?
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- A) 335 B) 281 C) 287 D) 284

Puzzle 3. What comes next in the sequence?

2	8	20	40	72	124	212	?
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- A) 367 B) 340 C) 240 D) 368

Puzzle 4. What comes next in the sequence?

11	2	12	3	18	7	17	10	25	12	22	17	?
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- A) 17 B) 30 C) 32 D) 33

Puzzle 5. What number replaces the question mark in the grid?

1	2	6
1	6	18
12	3	?

- A) 34 B) 10 C) 35 D) 18

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Puzzle 6. What comes next in the sequence?

3	11	33	93	263	759	2229	?
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- A) 6616 B) 2243 C) 6603 D) 6617

Puzzle 7. What comes next in the sequence?

3	3	15	2	6	8	22	4	9	13	29	6	?
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- A) 13 B) 14 C) 12 D) 18

Puzzle 8. What comes next in the sequence?

4	29	118	337	776	1549	2794	4673	?
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- A) 7372 B) 7396 C) 7348 D) 4673

Puzzle 9. What comes next in the sequence?

2	5	6	14	26	47	88	162	?
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- A) 299 B) 298 C) 297 D) 350

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

1	1	7
4	9	23
9	3	?

- A) 37 B) 10 C) 24 D) 38

Answer Key

1. **B) 7391**

4th differences are all 24 (quartic sequence).

6. **D) 6617**

Formula: $3^n + 1n(n-1)$. $n=8$: $6561 + 56 = 6617$.

2. **D) 284**

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

7. **C) 12**

Four interleaved arithmetic series (period 4):

3. **D) 368**

Formula: $2^n + 2n(n-1)$. $n=8$: $256 + 112 = 368$.

8. **A) 7372**

4th differences are all 24 (quartic sequence).

4. **C) 32**

Four interleaved arithmetic series (period 4):

9. **B) 298**

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

5. **A) 34**

Row sums are perfect squares: 9, 25, 49.

10. **A) 37**

Row sums are perfect squares: 9, 36, 49.