

Pattern Puzzles – Pack 55

Puzzle 1. What comes next in the sequence?

2	5	5	14	26	47	89	164	?
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- A) 300 B) 339 C) 302 D) 304

Puzzle 2. What comes next in the sequence?

4	4	3	13	22	40	77	141	?
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- A) 293 B) 260 C) 258 D) 262

Puzzle 3. What comes next in the sequence?

4	6	6	17	30	54	102	187	?
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- A) 344 B) 378 C) 345 D) 343

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

4	1	11
2	3	20
3	1	?

- A) 23 B) 32 C) 33 D) 21

Puzzle 5. What comes next in the sequence?

12	50	166	432	944	1822	3210	5276	?
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- A) 8212 B) 8188 C) 8236 D) 5276

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

1	1	1
6	5	2
3	9	?

- A) 18
 B) 14
 C) 12
 D) 19

Puzzle 7. What comes next in the sequence?

13	51	167	433	945	1823	3211	5277	?
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- A) 8237
 B) 5277
 C) 8213
 D) 8189

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

5	1	6
5	8	6
5	12	?

- A) 16
 B) 21
 C) 9
 D) 17

Puzzle 9. What comes next in the sequence?

6	6	4	17	28	50	96	175	?
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- A) 321
 B) 322
 C) 323
 D) 340

Puzzle 10. What comes next in the sequence?

13	3	4	12	18	10	10	15	23	17	16	18	?
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- A) 24
 B) 29
 C) 28
 D) 30

Answer Key

1. **C) 302**

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

2. **B) 260**

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

3. **A) 344**

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

4. **B) 32**

Row sums are perfect squares: 16, 25, 36.

5. **A) 8212**

4th differences are all 24 (quartic sequence).

6. **A) 18**

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

7. **C) 8213**

4th differences are all 24 (quartic sequence).

8. **A) 16**

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

9. **B) 322**

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

10. **C) 28**

Four interleaved arithmetic series (period 4):