

### Pattern Puzzles – Pack 37

**Puzzle 1.** What comes next in the sequence?

2	3	5	12	22	41	77	142	?
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- A) 264      B) 250      C) 262      D) 260

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

3	9	5
9	23	3
16	4	?

- A) 28      B) 38      C) 34      D) 37

**Puzzle 3.** What comes next in the sequence?

5	5	2	14	23	41	80	146	?
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- A) 269      B) 267      C) 249      D) 271

**Puzzle 4.** What comes next in the sequence?

12	51	170	441	960	1847	3246	5325	?
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- A) 5325      B) 8300      C) 8276      D) 8252

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

3	1	1
2	9	17
5	5	?

- A) 4      B) 2      C) 3      D) 1

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**Puzzle 6.** What comes next in the sequence?

8	50	180	476	1040	1998	3500	5720	?
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- A) 5720      B) 8832      C) 8856      D) 8880

**Puzzle 7.** What comes next in the sequence?

2	10	13	2	10	12	20	4	18	14	27	6	?
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- A) 27      B) 16      C) 20      D) 26

**Puzzle 8.** What comes next in the sequence?

10	12	7	11	15	16	9	13	20	20	11	15	?
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- A) 25      B) 26      C) 24      D) 27

**Puzzle 9.** What comes next in the sequence?

11	9	14	6	19	15	20	11	27	21	26	16	?
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- A) 27      B) 35      C) 36      D) 33

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

3	3	19
3	1	32
6	12	?

- A) 46      B) 47      C) 18      D) 35

## Answer Key

1. **C) 262**

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

6. **C) 8856**

4th differences are all 24 (quartic sequence).

2. **D) 37**

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

7. **D) 26**

Four interleaved arithmetic series (period 4):

3. **A) 269**

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

8. **A) 25**

Four interleaved arithmetic series (period 4):

4. **C) 8276**

4th differences are all 24 (quartic sequence).

9. **B) 35**

Four interleaved arithmetic series (period 4):

5. **C) 3**

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

10. **A) 46**

Row sums are perfect squares: 25, 36, 64.