

### Pattern Puzzles – Pack 57

**Puzzle 1.** What number replaces the question mark in the grid?

4	1	11
5	6	14
11	4	?

- A) 35     
  B) 34     
  C) 25     
  D) 10

**Puzzle 2.** What comes next in the sequence?

10	37	128	349	790	1565	2812	4693	?
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- A) 7394     
  B) 7370     
  C) 7418     
  D) 4693

**Puzzle 3.** What number replaces the question mark in the grid?

1	1	7
3	5	28
13	10	?

- A) 13     
  B) 14     
  C) 42     
  D) 41

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

13	59	197	505	1085	2063	3589	5837	?
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- A) 8981     
  B) 9029     
  C) 9005     
  D) 5837

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

5	5	15
8	8	20
7	11	?

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

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

4	4	3	2	11	8	10	6	18	12	17	10	?
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- A) 22     
  B) 26     
  C) 25     
  D) 16

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

6	3	4	15	24	45	86	157	?
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- A) 292     
  B) 281     
  C) 288     
  D) 290

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

7	9	10
6	12	15
8	7	?

- A) 3     
  B) 14     
  C) 11     
  D) 12

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

2	5	8
8	10	2
5	6	?

- A) 18     
  B) 11     
  C) 22     
  D) 19

**Puzzle 10.** What comes next in the sequence?

6	4	6	18	30	56	106	194	?
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- A) 360     
  B) 356     
  C) 358     
  D) 404

## Answer Key

1. **B) 34**

Row sums are perfect squares: 16, 25, 49.

6. **C) 25**

Four interleaved arithmetic series (period 4):

2. **A) 7394**

4th differences are all 24 (quartic sequence).

7. **D) 290**

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

3. **D) 41**

Row sums are perfect squares: 9, 36, 64.

8. **C) 11**

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

4. **C) 9005**

4th differences are all 24 (quartic sequence).

9. **A) 18**

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

5. **B) 46**

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

10. **C) 358**

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