

### Pattern Puzzles – Pack 46

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

|   |    |     |     |     |      |      |   |
|---|----|-----|-----|-----|------|------|---|
| 9 | 42 | 151 | 408 | 909 | 1774 | 3147 | ? |
|---|----|-----|-----|-----|------|------|---|

- A) 5172      B) 5220      C) 4520      D) 5196

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

|   |   |   |
|---|---|---|
| 3 | 4 | 6 |
| 2 | 5 | 8 |
| 3 | 8 | ? |

- A) 4      B) 6      C) 5      D) 8

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

|   |   |    |
|---|---|----|
| 6 | 6 | 6  |
| 6 | 4 | 10 |
| 3 | 8 | ?  |

- A) 11      B) 9      C) 10      D) 13

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

|   |   |   |
|---|---|---|
| 6 | 5 | 2 |
| 7 | 3 | 5 |
| 7 | 8 | ? |

- A) 0      B) 4      C) 1      D) 2

**Puzzle 5.** What comes next in the sequence?

|   |    |     |     |     |      |      |   |
|---|----|-----|-----|-----|------|------|---|
| 4 | 31 | 124 | 349 | 796 | 1579 | 2836 | ? |
|---|----|-----|-----|-----|------|------|---|

- A) 4705      B) 4753      C) 4729      D) 4093

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

|   |   |    |
|---|---|----|
| 3 | 4 | 10 |
| 4 | 7 | 8  |
| 6 | 8 | ?  |

- A) 6     
  B) 5     
  C) 9     
  D) 7

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

|   |   |    |
|---|---|----|
| 7 | 3 | 7  |
| 5 | 4 | 14 |
| 7 | 8 | ?  |

- A) 8     
  B) 13     
  C) 14     
  D) 20

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

|   |   |    |
|---|---|----|
| 2 | 6 | 12 |
| 6 | 2 | 14 |
| 4 | 5 | ?  |

- A) 17     
  B) 13     
  C) 14     
  D) 15

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

|   |    |    |     |     |      |      |   |
|---|----|----|-----|-----|------|------|---|
| 6 | 26 | 98 | 282 | 662 | 1346 | 2466 | ? |
|---|----|----|-----|-----|------|------|---|

- A) 4202     
  B) 4154     
  C) 3586     
  D) 4178

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

|   |    |     |     |     |      |      |   |
|---|----|-----|-----|-----|------|------|---|
| 4 | 30 | 128 | 370 | 852 | 1694 | 3040 | ? |
|---|----|-----|-----|-----|------|------|---|

- A) 5082     
  B) 5058     
  C) 5034     
  D) 4386

## Answer Key

1. **D) 5196**  
4th diffs: 24 (constant – quartic sequence).
2. **B) 6**  
Row sums form arithmetic sequence: 13, 15, 17.
3. **A) 11**  
Row sums form arithmetic sequence: 18, 20, 22.
4. **D) 2**  
Row sums form arithmetic sequence: 13, 15, 17.
5. **C) 4729**  
4th diffs: 24 (constant – quartic sequence).
6. **D) 7**  
Row sums form arithmetic sequence: 17, 19, 21.
7. **C) 14**  
Row sums form arithmetic sequence: 17, 23, 29.
8. **D) 15**  
Row sums form arithmetic sequence: 20, 22, 24.
9. **D) 4178**  
4th diffs: 24 (constant – quartic sequence).
10. **B) 5058**  
4th diffs: 24 (constant – quartic sequence).