

### Pattern Puzzles – Pack 31

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

7	24	91	268	639	1312	2419	?
---	----	----	-----	-----	------	------	---

- A) 4092      B) 4140      C) 4116      D) 3526

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

7	40	151	412	919	1792	3175	?
---	----	-----	-----	-----	------	------	---

- A) 4558      B) 5260      C) 5212      D) 5236

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

3	4	7
7	5	7
8	7	?

- A) 14      B) 4      C) 8      D) 9

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

7	2	12
3	5	19
5	3	?

- A) 19      B) 31      C) 25      D) 24

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

2	18	86	266	642	1322	2438	?
---	----	----	-----	-----	------	------	---

- A) 4170      B) 3554      C) 4122      D) 4146

### Pattern Puzzles – Pack 31

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

2	18	84	260	630	1302	2408	?
---	----	----	-----	-----	------	------	---

- A) 4080      B) 4128      C) 3514      D) 4104

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

2	26	114	332	770	1542	2786	?
---	----	-----	-----	-----	------	------	---

- A) 4030      B) 4640      C) 4688      D) 4664

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

6	3	9
7	2	13
5	5	?

- A) 16      B) 20      C) 15      D) 12

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

4	6	14
5	2	19
5	5	?

- A) 16      B) 18      C) 20      D) 17

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

8	5	10
7	6	12
6	3	?

- A) 16      B) 20      C) 17      D) 18

## Answer Key

1. **C) 4116**

4th diffs: 24 (constant – quartic sequence).

6. **D) 4104**

4th diffs: 24 (constant – quartic sequence).

2. **D) 5236**

4th diffs: 24 (constant – quartic sequence).

7. **D) 4664**

4th diffs: 24 (constant – quartic sequence).

3. **D) 9**

Row sums form arithmetic sequence: 14, 19, 24.

8. **A) 16**

Row sums form arithmetic sequence: 18, 22, 26.

4. **C) 25**

Row sums form arithmetic sequence: 21, 27, 33.

9. **B) 18**

Row sums form arithmetic sequence: 24, 26, 28.

5. **D) 4146**

4th diffs: 24 (constant – quartic sequence).

10. **D) 18**

Row sums form arithmetic sequence: 23, 25, 27.