

Pattern Puzzles – Pack 5

Puzzle 1. What comes next in the sequence?

4	28	124	364	844	1684	3028	?
---	----	-----	-----	-----	------	------	---

- A) 5068 B) 4372 C) 5020 D) 5044

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

2	5	6
5	4	9
2	7	?

- A) 19 B) 13 C) 14 D) 9

Puzzle 3. What comes next in the sequence?

7	33	125	349	795	1577	2833	?
---	----	-----	-----	-----	------	------	---

- A) 4749 B) 4089 C) 4725 D) 4701

Puzzle 4. What comes next in the sequence?

7	27	107	313	735	1487	2707	?
---	----	-----	-----	-----	------	------	---

- A) 4581 B) 3927 C) 4533 D) 4557

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

5	4	6
4	2	11
8	5	?

- A) 6 B) 4 C) 5 D) 8

Pattern Puzzles – Pack 5

Puzzle 6. What comes next in the sequence?

4	13	36	97	268	765	?
---	----	----	----	-----	-----	---

- A) 2235 B) 778 C) 2223 D) 2236

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

3	6	4
6	5	6
3	4	?

- A) 10 B) 14 C) 13 D) 18

Puzzle 8. What comes next in the sequence?

8	38	134	362	812	1598	2858	?
---	----	-----	-----	-----	------	------	---

- A) 4778 B) 4754 C) 4118 D) 4730

Puzzle 9. What comes next in the sequence?

2	19	96	299	718	1467	2684	?
---	----	----	-----	-----	------	------	---

- A) 4531 B) 3901 C) 4507 D) 4555

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

3	4	13
2	7	17
3	8	?

- A) 20 B) 27 C) 15 D) 21

Answer Key

1. **D) 5044**

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

6. **D) 2236**

Formula: $1n^2 + 3^n$. $n=7: 49 + 2187 = 2236$.

2. **C) 14**

Row sums form arithmetic sequence: 13, 18, 23.

7. **B) 14**

Row sums form arithmetic sequence: 13, 17, 21.

3. **C) 4725**

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

8. **B) 4754**

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

4. **D) 4557**

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

9. **A) 4531**

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

5. **A) 6**

Row sums form arithmetic sequence: 15, 17, 19.

10. **D) 21**

Row sums form arithmetic sequence: 20, 26, 32.