

Pattern Puzzles – Pack 4

Puzzle 1. What comes next in the sequence?

10	56	194	502	1082	2060	3586	5834	?
----	----	-----	-----	------	------	------	------	---

- A) 9002 B) 9026 C) 8978 D) 5834

Puzzle 2. What comes next in the sequence?

2	12	13	5	6	15	16	12	10	18	19	19	?
---	----	----	---	---	----	----	----	----	----	----	----	---

- A) 14 B) 15 C) 21 D) 13

Puzzle 3. What comes next in the sequence?

8	45	160	425	936	1813	3200	5265	?
---	----	-----	-----	-----	------	------	------	---

- A) 5265 B) 8200 C) 8224 D) 8176

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

1	6	18
8	11	30
4	14	?

- A) 22 B) 31 C) 46 D) 47

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

3	2	11
6	9	21
8	3	?

- A) 39 B) 38 C) 18 D) 25

Pattern Puzzles – Pack 4

Puzzle 6. What comes next in the sequence?

3	3	5	12	21	39	73	134	?
---	---	---	----	----	----	----	-----	---

- A) 247 B) 248 C) 246 D) 198

Puzzle 7. What comes next in the sequence?

13	3	2	2	20	10	6	7	27	17	10	12	?
----	---	---	---	----	----	---	---	----	----	----	----	---

- A) 31 B) 24 C) 34 D) 35

Puzzle 8. What comes next in the sequence?

3	26	111	324	755	1518	2751	4616	?
---	----	-----	-----	-----	------	------	------	---

- A) 7299 B) 7275 C) 7323 D) 4616

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

1	2	22
3	3	30
11	1	?

- A) 26 B) 37 C) 24 D) 38

Puzzle 10. What comes next in the sequence?

3	5	4	14	25	45	86	158	?
---	---	---	----	----	----	----	-----	---

- A) 293 B) 345 C) 289 D) 291

Answer Key

1. **A) 9002**

4th differences are all 24 (quartic sequence).

6. **A) 247**

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

2. **A) 14**

Four interleaved arithmetic series (period 4):

7. **C) 34**

Four interleaved arithmetic series (period 4):

3. **B) 8200**

4th differences are all 24 (quartic sequence).

8. **A) 7299**

4th differences are all 24 (quartic sequence).

4. **C) 46**

Row sums are perfect squares: 25, 49, 64.

9. **B) 37**

Row sums are perfect squares: 25, 36, 49.

5. **B) 38**

Row sums are perfect squares: 16, 36, 49.

10. **D) 291**

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