

Pattern Puzzles – Pack 8

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

2	2	5
10	2	37
12	5	?

- A) 47
 B) 48
 C) 7
 D) 32

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

2	1	6
1	5	19
10	15	?

- A) 0
 B) 39
 C) 40
 D) 23

Puzzle 3. What comes next in the sequence?

5	5	2	15	25	45	88	161	?
---	---	---	----	----	----	----	-----	---

- A) 283
 B) 294
 C) 297
 D) 300

Puzzle 4. What comes next in the sequence?

6	33	124	345	786	1561	2808	4689	?
---	----	-----	-----	-----	------	------	------	---

- A) 7390
 B) 4689
 C) 7366
 D) 7414

Puzzle 5. What comes next in the sequence?

6	5	3	15	24	43	83	151	?
---	---	---	----	----	----	----	-----	---

- A) 277
 B) 332
 C) 279
 D) 278

Pattern Puzzles – Pack 8

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

2	1	13
3	4	29
3	12	?

- A) 35
 B) 14
 C) 21
 D) 34

Puzzle 7. What comes next in the sequence?

12	57	192	495	1068	2037	3552	5787	?
----	----	-----	-----	------	------	------	------	---

- A) 5787
 B) 8964
 C) 8940
 D) 8916

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

4	4	8
2	4	19
3	13	?

- A) 9
 B) 48
 C) 39
 D) 49

Puzzle 9. What comes next in the sequence?

11	44	145	380	839	1636	2909	4820	?
----	----	-----	-----	-----	------	------	------	---

- A) 4820
 B) 7555
 C) 7579
 D) 7531

Puzzle 10. What comes next in the sequence?

13	10	4	7	19	12	7	9	25	14	10	11	?
----	----	---	---	----	----	---	---	----	----	----	----	---

- A) 31
 B) 16
 C) 27
 D) 32

Answer Key

1. **A) 47**

Row sums are perfect squares: 9, 49, 64.

6. **D) 34**

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

2. **B) 39**

Row sums are perfect squares: 9, 25, 64.

7. **C) 8940**

4th differences are all 24 (quartic sequence).

3. **C) 297**

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

8. **B) 48**

Row sums are perfect squares: 16, 25, 64.

4. **A) 7390**

4th differences are all 24 (quartic sequence).

9. **B) 7555**

4th differences are all 24 (quartic sequence).

5. **D) 278**

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

10. **A) 31**

Four interleaved arithmetic series (period 4):