

Pattern Puzzles – Pack 12

Puzzle 1. What comes next in the sequence?

6	5	3	17	28	51	99	181	?
---	---	---	----	----	----	----	-----	---

- A) 342 B) 334 C) 337 D) 331

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

2	2	5
1	1	34
8	14	?

- A) 43 B) 14 C) 42 D) 15

Puzzle 3. What comes next in the sequence?

2	4	3	12	22	40	77	142	?
---	---	---	----	----	----	----	-----	---

- A) 259 B) 265 C) 271 D) 262

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

2	2	5
6	5	14
2	8	?

- A) 6 B) 4 C) 2 D) 3

Puzzle 5. What comes next in the sequence?

3	6	13	9	8	13	15	13	13	20	17	17	?
---	---	----	---	---	----	----	----	----	----	----	----	---

- A) 20 B) 19 C) 18 D) 27

Pattern Puzzles – Pack 12

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

3	2	3
5	4	4
13	22	?

- A) 21
 B) 31
 C) 30
 D) 29

Puzzle 7. What comes next in the sequence?

3	4	4	12	21	38	72	132	?
---	---	---	----	----	----	----	-----	---

- A) 216
 B) 243
 C) 242
 D) 244

Puzzle 8. What comes next in the sequence?

8	46	164	434	952	1838	3236	5314	?
---	----	-----	-----	-----	------	------	------	---

- A) 8240
 B) 8264
 C) 8288
 D) 5314

Puzzle 9. What comes next in the sequence?

13	13	6	15	15	16	12	21	17	19	18	27	?
----	----	---	----	----	----	----	----	----	----	----	----	---

- A) 23
 B) 22
 C) 19
 D) 20

Puzzle 10. What comes next in the sequence?

5	2	2	11	17	32	62	113	?
---	---	---	----	----	----	----	-----	---

- A) 207
 B) 169
 C) 211
 D) 209

Answer Key

1. **B) 334**

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

6. **D) 29**

Column sums are triangular numbers: 21, 28, 36.

2. **C) 42**

Row sums are perfect squares: 9, 36, 64.

7. **B) 243**

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

3. **D) 262**

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

8. **B) 8264**

4th differences are all 24 (quartic sequence).

4. **C) 2**

Column sums are triangular numbers: 10, 15, 21.

9. **C) 19**

Four interleaved arithmetic series (period 4):

5. **C) 18**

Four interleaved arithmetic series (period 4):

10. **D) 209**

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