

Pattern Puzzles – Pack 28

Puzzle 1. What comes next in the sequence?

3	6	12	7	9	14	14	14	15	22	16	21	?
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A) 23	B) 22	C) 21	D) 30
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Puzzle 2. What comes next in the sequence?

14	15	6	7	19	21	12	10	24	27	18	13	?
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A) 26	B) 29	C) 30	D) 33
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Puzzle 3. What number replaces the question mark in the grid?

2	1	13
6	3	40
7	5	?

A) 19	B) 52	C) 53	D) 37
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Puzzle 4. What number replaces the question mark in the grid?

1	1	7
3	2	20
13	7	?

A) 45	B) 5	C) 28	D) 44
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Puzzle 5. What comes next in the sequence?

4	30	120	340	780	1554	2800	4680	?
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A) 7380	B) 7404	C) 7356	D) 4680
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Puzzle 6. What number replaces the question mark in the grid?

5	4	1
3	12	21
20	20	?

- A) 24
 B) 25
 C) 14
 D) 23

Puzzle 7. What comes next in the sequence?

7	35	127	349	791	1567	2815	4697	?
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- A) 7375
 B) 4697
 C) 7423
 D) 7399

Puzzle 8. What comes next in the sequence?

3	5	3	13	23	41	79	145	?
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- A) 265
 B) 304
 C) 267
 D) 269

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

6	1	14
18	6	9
4	29	?

- A) 22
 B) 13
 C) 23
 D) 25

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

2	4	10
3	4	29
14	6	?

- A) 45
 B) 44
 C) 24
 D) 16

Answer Key

1. **C) 21**
Four interleaved arithmetic series (period 4):
2. **B) 29**
Four interleaved arithmetic series (period 4):
3. **B) 52**
Row sums are perfect squares: 16, 49, 64.
4. **D) 44**
Row sums are perfect squares: 9, 25, 64.
5. **A) 7380**
4th differences are all 24 (quartic sequence).
6. **D) 23**
Column sums are triangular numbers: 28, 36, 45.
7. **D) 7399**
4th differences are all 24 (quartic sequence).
8. **C) 267**
Rule: $a(n) = a(n-1) + a(n-2) + a(n-3) + 2$.
9. **A) 22**
Column sums are triangular numbers: 28, 36, 45.
10. **B) 44**
Row sums are perfect squares: 16, 36, 64.