

Pattern Puzzles – Pack 6

Puzzle 1. What comes next in the sequence?

1	3	8	19	42	89	184	?
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- A) 375
 B) 374
 C) 368
 D) 191

Puzzle 2. What comes next in the sequence?

4	21	98	301	720	1469	2686	?
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- A) 4509
 B) 4533
 C) 3903
 D) 4557

Puzzle 3. What comes next in the sequence?

7	38	145	400	899	1762	3133	?
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- A) 4504
 B) 5156
 C) 5204
 D) 5180

Puzzle 4. What comes next in the sequence?

2	5	10	17	28	41	58	?
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- A) 78
 B) 75
 C) 60
 D) 77

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

7	5	4
4	7	9
3	4	?

- A) 21
 B) 13
 C) 16
 D) 17

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Puzzle 6. What comes next in the sequence?

5	32	123	344	785	1560	2807	?
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- A) 4054 B) 4712 C) 4664 D) 4688

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

2	8	4
2	5	11
2	4	?

- A) 16 B) 12 C) 20 D) 15

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

6	8	7
4	2	19
3	5	?

- A) 20 B) 21 C) 17 D) 25

Puzzle 9. What comes next in the sequence?

3	20	89	270	647	1328	2445	?
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- A) 4130 B) 4154 C) 3562 D) 4178

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

5	2	7
8	3	8
8	8	?

- A) 8 B) 3 C) 7 D) 13

Answer Key

1. **A) 375**

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

6. **D) 4688**

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

2. **B) 4533**

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

7. **A) 16**

Row sums form arithmetic sequence: 14, 18, 22.

3. **D) 5180**

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

8. **B) 21**

Row sums form arithmetic sequence: 21, 25, 29.

4. **D) 77**

Each term = sum of first n primes.

9. **B) 4154**

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

5. **D) 17**

Row sums form arithmetic sequence: 16, 20, 24.

10. **A) 8**

Row sums form arithmetic sequence: 14, 19, 24.