

Pattern Puzzles – Pack 42

Puzzle 1. What comes next in the sequence?

7 18 40 84 172 348 ?

- A) 700 B) 699 C) 348 D) 696

Puzzle 2. What comes next in the sequence?

4 7 7 8 12 9 12 17 ?

- A) 22 B) 11 C) 12 D) 16

Puzzle 3. What comes next in the sequence?

7 6 9 11 11 13 15 16 ?

- A) 19 B) 17 C) 18 D) 21

Puzzle 4. What comes next in the sequence?

4 14 38 82 152 254 394 ?

- A) 578 B) 534 C) 584 D) 572

Puzzle 5. What comes next in the sequence?

13 7 8 18 9 15 23 11 ?

- A) 13 B) 23 C) 22 D) 28

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Puzzle 6. What comes next in the sequence?

14	42	33	99	90	270	261	783	?
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| A) 2350 | B) 783 | C) 774 | D) 2349 |
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Puzzle 7. What comes next in the sequence?

2	5	14	41	122	365	1094	?
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| A) 1823 | B) 3281 | C) 2552 | D) 3284 |
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Puzzle 8. What comes next in the sequence?

9	23	53	105	185	299	453	?
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| A) 653 | B) 647 | C) 607 | D) 659 |
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Puzzle 9. What comes next in the sequence?

3	6	12	24	48	96	192	?
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| A) 394 | B) 387 | C) 384 | D) 288 |
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Puzzle 10. What comes next in the sequence?

8	4	5	11	9	7	14	14	?
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| A) 19 | B) 9 | C) 10 | D) 17 |
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Answer Key

1. **A) 700**

Rule: $a(n) = 2 \times a(n-1) + 4$.

6. **D) 2349**

Alternating: $\times 3$ (odd steps), -9 (even steps).

2. **B) 11**

Three interleaved arithmetic series (period 3).

7. **B) 3281**

Differences form geometric sequence ($\times 3$): 3, 9, 27, 81, 243, 729, 2187.

3. **B) 17**

Three interleaved arithmetic series (period 3).

8. **A) 653**

1st diffs: 14, 30, 52, 80, 114, 154.

4. **A) 578**

1st diffs: 10, 24, 44, 70, 102, 140.

9. **C) 384**

Differences form geometric sequence ($\times 2$): 3, 6, 12, 24, 48, 96, 192.

5. **C) 22**

Three interleaved arithmetic series (period 3).

10. **B) 9**

Three interleaved arithmetic series (period 3).