

Pattern Puzzles – Pack 13

Puzzle 1. What comes next in the sequence?

9	27	16	48	37	111	100	300	?
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|--------|--------|--------|--------|
| A) 900 | B) 289 | C) 300 | D) 901 |
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Puzzle 2. What comes next in the sequence?

10	18	38	76	138	230	358	?
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| A) 528 | B) 534 | C) 522 | D) 486 |
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Puzzle 3. What comes next in the sequence?

6	15	38	81	150	251	390	?
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| A) 573 | B) 529 | C) 579 | D) 567 |
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Puzzle 4. What comes next in the sequence?

12	24	13	26	15	30	19	38	?
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| A) 38 | B) 77 | C) 27 | D) 76 |
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Puzzle 5. What comes next in the sequence?

4	4	4	12	20	36	68	124	?
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| A) 160 | B) 228 | C) 192 | D) 215 |
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Puzzle 6. What comes next in the sequence?

8	17	38	77	140	233	362	?
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| A) 491 | B) 539 | C) 533 | D) 527 |
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Puzzle 7. What comes next in the sequence?

9	15	7	11	17	11	13	19	?
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| A) 21 | B) 15 | C) 16 | D) 11 |
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Puzzle 8. What comes next in the sequence?

6	22	56	114	202	326	492	?
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| A) 706 | B) 658 | C) 712 | D) 700 |
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Puzzle 9. What comes next in the sequence?

16	32	28	56	52	104	100	200	?
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| A) 200 | B) 400 | C) 196 | D) 401 |
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Puzzle 10. What comes next in the sequence?

6	10	22	58	166	490	1462	?
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| A) 4382 | B) 4378 | C) 3406 | D) 2434 |
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Answer Key

1. **A) 900**

Alternating: $\times 3$ (odd steps), -11 (even steps).

6. **C) 533**

1st diffs: 9, 21, 39, 63, 93, 129.

2. **A) 528**

1st diffs: 8, 20, 38, 62, 92, 128.

7. **B) 15**

Three interleaved arithmetic series (period 3).

3. **A) 573**

1st diffs: 9, 23, 43, 69, 101, 139.

8. **A) 706**

1st diffs: 16, 34, 58, 88, 124, 166.

4. **D) 76**

Alternating: $\times 2$ (odd steps), -11 (even steps).

9. **B) 400**

Alternating: $\times 2$ (odd steps), -4 (even steps).

5. **B) 228**

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

10. **B) 4378**

Differences form geometric sequence ($\times 3$): 4, 12, 36, 108, 324, 972, 2916.