

Pattern Puzzles – Pack 31

Puzzle 1. What comes next in the sequence?

14	42	36	108	102	306	300	900	?
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|--------|--------|---------|---------|
| A) 894 | B) 900 | C) 2700 | D) 2701 |
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Puzzle 2. What comes next in the sequence?

3	8	18	38	78	158	?
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|--------|--------|--------|--------|
| A) 317 | B) 316 | C) 318 | D) 158 |
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Puzzle 3. What comes next in the sequence?

3	9	21	45	93	189	?
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|--------|--------|--------|--------|
| A) 381 | B) 380 | C) 378 | D) 189 |
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Puzzle 4. What comes next in the sequence?

10	13	22	49	130	373	1102	?
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| A) 1831 | B) 3292 | C) 3289 | D) 2560 |
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Puzzle 5. What comes next in the sequence?

14	42	39	117	114	342	339	1017	?
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| A) 1014 | B) 1017 | C) 3052 | D) 3051 |
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Puzzle 6. What comes next in the sequence?

15	11	5	20	17	13	25	23	?
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| A) 22 | B) 21 | C) 30 | D) 29 |
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Puzzle 7. What comes next in the sequence?

14	28	21	42	35	70	63	126	?
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|--------|--------|--------|--------|
| A) 119 | B) 252 | C) 253 | D) 126 |
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Puzzle 8. What comes next in the sequence?

5	8	17	44	125	368	1097	?
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| A) 3287 | B) 1826 | C) 3284 | D) 2555 |
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Puzzle 9. What comes next in the sequence?

9	6	14	15	10	17	21	14	?
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| A) 27 | B) 18 | C) 20 | D) 21 |
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Puzzle 10. What comes next in the sequence?

4	1	4	9	14	27	50	91	?
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|--------|--------|--------|--------|
| A) 118 | B) 168 | C) 141 | D) 153 |
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Answer Key

1. **C) 2700**

Alternating: $\times 3$ (odd steps), -6 (even steps).

2. **C) 318**

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

3. **A) 381**

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

4. **C) 3289**

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

5. **D) 3051**

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

6. **B) 21**

Three interleaved arithmetic series (period 3).

7. **B) 252**

Alternating: $\times 2$ (odd steps), -7 (even steps).

8. **C) 3284**

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

9. **C) 20**

Three interleaved arithmetic series (period 3).

10. **B) 168**

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