

Pattern Puzzles – Pack 20

Puzzle 1. What comes next in the sequence?

7	10	16	28	52	100	196	?
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|--------|--------|--------|--------|
| A) 388 | B) 391 | C) 292 | D) 372 |
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Puzzle 2. What comes next in the sequence?

9	21	47	93	165	269	411	?
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| A) 591 | B) 597 | C) 553 | D) 603 |
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Puzzle 3. What comes next in the sequence?

4	13	36	79	148	249	388	?
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| A) 527 | B) 565 | C) 577 | D) 571 |
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Puzzle 4. What comes next in the sequence?

18	36	25	50	39	78	67	134	?
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| A) 269 | B) 268 | C) 123 | D) 134 |
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Puzzle 5. What comes next in the sequence?

2	8	26	62	122	212	338	?
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| A) 464 | B) 500 | C) 506 | D) 512 |
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Puzzle 6. What comes next in the sequence?

9	13	25	61	169	493	1465	?
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| A) 4381 | B) 4385 | C) 2437 | D) 3409 |
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Puzzle 7. What comes next in the sequence?

2	5	3	10	18	31	59	108	?
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| A) 177 | B) 198 | C) 167 | D) 139 |
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Puzzle 8. What comes next in the sequence?

4	1	5	10	16	31	57	104	?
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| A) 161 | B) 135 | C) 192 | D) 169 |
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Puzzle 9. What comes next in the sequence?

11	22	12	24	14	28	18	36	?
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| A) 36 | B) 72 | C) 26 | D) 73 |
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Puzzle 10. What comes next in the sequence?

2	10	32	74	142	242	380	?
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| A) 556 | B) 568 | C) 562 | D) 518 |
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Answer Key

1. A) 388

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

2. B) 597

1st diffs: 12, 26, 46, 72, 104, 142.

3. D) 571

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

4. B) 268

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

5. C) 506

1st diffs: 6, 18, 36, 60, 90, 126.

6. A) 4381

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

7. B) 198

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

8. C) 192

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

9. B) 72

Alternating: $\times 2$ (odd steps), -10 (even steps).

10. C) 562

1st diffs: 8, 22, 42, 68, 100, 138.