

Pattern Puzzles – Pack 6

Puzzle 1. What comes next in the sequence?

2	4	10	23	49	97	182	328	?
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- A) 627
 B) 756
 C) 493
 D) 574

Puzzle 2. What comes next in the sequence?

3	8	21	55	144	377	987	?
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- A) 1597
 B) 6765
 C) 2961
 D) 6764

Puzzle 3. What number replaces the question mark in the grid?

3	2	8
2	5	14
1	6	?

- A) 27
 B) 14
 C) 26
 D) 35

Puzzle 4. What comes next in the sequence?

1	3	8	21	55	144	377	?
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- A) 2584
 B) 1131
 C) 610
 D) 2583

Puzzle 5. What comes next in the sequence?

1	4	9	22	47	94	177	320	?
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- A) 561
 B) 648
 C) 738
 D) 480

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Puzzle 6. What comes next in the sequence?

1	3	8	20	44	89	169	307	?
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- A) 540 B) 459 C) 709 D) 526

Puzzle 7. What comes next in the sequence?

4	1	9	19	44	88	168	305	?
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- A) 456 B) 489 C) 705 D) 537

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

2	1	5
4	2	7
4	6	?

- A) 10 B) 3 C) 11 D) 16

Puzzle 9. What comes next in the sequence?

3	4	11	24	51	100	187	336	?
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- A) 587 B) 774 C) 704 D) 506

Puzzle 10. What comes next in the sequence?

4	2	10	21	47	93	176	318	?
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- A) 734 B) 582 C) 558 D) 477

Answer Key

1. **D) 574**

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

6. **A) 540**

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

2. **B) 6765**

Rule: $a(n) = 3 \times a(n-1) - a(n-2)$ (Lucas-type sequence).

7. **D) 537**

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

3. **A) 27**

Row sums are Fibonacci numbers: $F(7)=13$, $F(8)=21$, $F(9)=34$.

8. **C) 11**

Row sums are Fibonacci numbers: $F(6)=8$, $F(7)=13$, $F(8)=21$.

4. **A) 2584**

Rule: $a(n) = 3 \times a(n-1) - a(n-2)$ (Lucas-type sequence).

9. **A) 587**

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

5. **A) 561**

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

10. **C) 558**

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