

Pattern Puzzles – Pack 17

Puzzle 1. What number replaces the question mark in the grid?

1	1	3
1	1	6
3	4	?

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Puzzle 2. What comes next in the sequence?

4	4	5	12	9	36	14	108	23	?
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Puzzle 3. What comes next in the sequence?

2	3	4	9	6	27	10	81	16	?
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Puzzle 4. What number replaces the question mark in the grid?

2	2	4
2	1	10
5	1	?

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Puzzle 5. What comes next in the sequence?

2	3	3	9	5	27	8	81	13	?
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Puzzle 6. What number replaces the question mark in the grid?

1	2	5
2	1	10
1	6	?

- A) 6
 B) 14
 C) 19
 D) 13

Puzzle 7. What comes next in the sequence?

2	4	2	8	4	16	6	32	10	?
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- A) 64
 B) 65
 C) 68
 D) 16

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

1	1	3
2	1	5
3	1	?

- A) 8
 B) 12
 C) 4
 D) 9

Puzzle 9. What comes next in the sequence?

3	2	9	20	45	90	171	310	?
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- A) 498
 B) 716
 C) 464
 D) 545

Puzzle 10. What comes next in the sequence?

3	2	4	4	7	8	11	16	18	?
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- A) 29
 B) 32
 C) 36
 D) 33

Answer Key

1. **B) 6**

Row sums are Fibonacci numbers: $F(5)=5$, $F(6)=8$, $F(7)=13$.

6. **B) 14**

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

2. **B) 324**

Odd positions: Fibonacci-like sequence starting 4, 5.

7. **A) 64**

Odd positions: Fibonacci-like sequence starting 2, 2.

3. **D) 243**

Odd positions: Fibonacci-like sequence starting 2, 4.

8. **D) 9**

Row sums are Fibonacci numbers: $F(5)=5$, $F(6)=8$, $F(7)=13$.

4. **B) 15**

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

9. **D) 545**

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

5. **A) 243**

Odd positions: Fibonacci-like sequence starting 2, 3.

10. **B) 32**

Odd positions: Fibonacci-like sequence starting 3, 4.