

### Pattern Puzzles – Pack 11

**Puzzle 1.** What comes next in the sequence?

2	4	3	8	5	16	8	32	13	?
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- A) 57      B) 64      C) 65      D) 21

**Puzzle 2.** What number replaces the question mark in the grid?

6	7	8
10	10	14
2	1	?

- A) 65      B) 31      C) 51      D) 52

**Puzzle 3.** What comes next in the sequence?

4	4	4	8	8	16	12	32	20	?
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- A) 32      B) 51      C) 65      D) 64

**Puzzle 4.** What number replaces the question mark in the grid?

2	2	17
5	5	24
11	2	?

- A) 55      B) 41      C) 42      D) 21

**Puzzle 5.** What comes next in the sequence?

2	4	5	12	7	36	12	108	19	?
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- A) 31      B) 316      C) 324      D) 325

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**Puzzle 6.** What number replaces the question mark in the grid?

1	1	6
2	3	8
2	7	?

- A) 11     
  B) 17     
  C) 12     
  D) 4

**Puzzle 7.** What comes next in the sequence?

3	6	15	39	102	267	699	?
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- A) 4790     
  B) 1131     
  C) 4791     
  D) 2097

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

1	3	17
11	6	17
18	14	?

- A) 23     
  B) 2     
  C) 22     
  D) 36

**Puzzle 9.** What number replaces the question mark in the grid?

2	4	7
3	6	12
11	1	?

- A) 21     
  B) 9     
  C) 30     
  D) 22

**Puzzle 10.** What comes next in the sequence?

4	8	20	52	136	356	932	?
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- A) 6387     
  B) 1508     
  C) 2796     
  D) 6388

## Answer Key

1. **B) 64**

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

6. **C) 12**

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

2. **D) 52**

Row sums are Fibonacci numbers:  $F(8)=21$ ,  $F(9)=34$ ,  $F(10)=55$ .

7. **C) 4791**

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

3. **D) 64**

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

8. **A) 23**

Row sums are Fibonacci numbers:  $F(8)=21$ ,  $F(9)=34$ ,  $F(10)=55$ .

4. **C) 42**

Row sums are Fibonacci numbers:  $F(8)=21$ ,  $F(9)=34$ ,  $F(10)=55$ .

9. **D) 22**

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

5. **C) 324**

Odd positions: Fibonacci-like sequence starting 2, 5.

10. **D) 6388**

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