

## Pattern Puzzles – Pack 15

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

|   |   |   |
|---|---|---|
| 1 | 2 | 5 |
| 3 | 1 | 9 |
| 3 | 7 | ? |

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**Puzzle 2.** What comes next in the sequence?

|   |   |   |   |   |    |   |    |    |   |
|---|---|---|---|---|----|---|----|----|---|
| 3 | 3 | 3 | 6 | 6 | 12 | 9 | 24 | 15 | ? |
|---|---|---|---|---|----|---|----|----|---|

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

|   |   |   |   |   |    |    |    |    |   |
|---|---|---|---|---|----|----|----|----|---|
| 5 | 3 | 3 | 9 | 8 | 27 | 11 | 81 | 19 | ? |
|---|---|---|---|---|----|----|----|----|---|

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

|   |    |    |
|---|----|----|
| 3 | 2  | 16 |
| 3 | 10 | 21 |
| 5 | 6  | ?  |

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**Puzzle 5.** What number replaces the question mark in the grid?

|   |   |    |
|---|---|----|
| 2 | 3 | 8  |
| 5 | 4 | 12 |
| 7 | 5 | ?  |

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

|    |   |    |
|----|---|----|
| 1  | 6 | 14 |
| 10 | 1 | 23 |
| 16 | 9 | ?  |

- A) 30     
  B) 9     
  C) 29     
  D) 43

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

|   |   |   |   |   |    |    |    |    |   |
|---|---|---|---|---|----|----|----|----|---|
| 5 | 3 | 4 | 6 | 9 | 12 | 13 | 24 | 22 | ? |
|---|---|---|---|---|----|----|----|----|---|

- A) 48     
  B) 53     
  C) 35     
  D) 49

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

|    |    |    |
|----|----|----|
| 1  | 6  | 14 |
| 8  | 3  | 23 |
| 16 | 16 | ?  |

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

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

|   |   |   |
|---|---|---|
| 2 | 2 | 4 |
| 3 | 4 | 6 |
| 7 | 7 | ? |

- A) 6     
  B) 9     
  C) 7     
  D) 12

**Puzzle 10.** What number replaces the question mark in the grid?

|   |    |    |
|---|----|----|
| 4 | 4  | 13 |
| 9 | 11 | 14 |
| 8 | 8  | ?  |

- A) 38     
  B) 18     
  C) 52     
  D) 39

## Answer Key

**1. A) 11**

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

**6. A) 30**

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

**2. C) 48**

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

**7. A) 48**

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

**3. C) 243**

Odd positions: Fibonacci-like sequence starting 5, 3.

**8. D) 23**

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

**4. D) 44**

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

**9. C) 7**

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

**5. D) 22**

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

**10. D) 39**

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