

### Pattern Puzzles – Pack 18

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

4	2	4	6	8	18	12	54	20	?
---	---	---	---	---	----	----	----	----	---

- A) 174      B) 32      C) 162      D) 163

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

2	3	7	18	47	123	322	?
---	---	---	----	----	-----	-----	---

- A) 2207      B) 521      C) 966      D) 2206

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

1	1	3
2	1	5
4	1	?

- A) 3      B) 11      C) 8      D) 7

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

4	4	5
1	1	19
6	3	?

- A) 25      B) 12      C) 24      D) 33

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

2	4	2	12	4	36	6	108	10	?
---	---	---	----	---	----	---	-----	----	---

- A) 370      B) 16      C) 325      D) 324

### Pattern Puzzles – Pack 18

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

7	4	10
5	2	27
8	17	?

- 

**Puzzle 7.** What number replaces the question mark in the grid?

6	1	14
7	1	26
6	2	?

- 

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

2	1	10
3	6	12
11	1	?

- 

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

4	2	7
4	6	11
1	9	?

- 

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

2	1	5
3	3	7
5	4	?

-

## Answer Key

**1. C) 162**

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

**6. D) 30**

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

**2. A) 2207**

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

**7. D) 47**

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

**3. C) 8**

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

**8. D) 22**

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

**4. A) 25**

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

**9. D) 24**

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

**5. D) 324**

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

**10. C) 12**

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