

### Pattern Puzzles – Pack 9

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

8	27	64	125	216	?
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- A) 343      B) 392      C) 512      D) 294

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

3	13	24	34	45	55	66	?
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- A) 76      B) 75      C) 77      D) 87

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

19	24	30	35	41	46	52	?
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- A) 56      B) 58      C) 57      D) 63

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

2	6	18
2	6	18
2	4	?

- A) 8      B) 6      C) 12      D) 18

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

1	8	22	50	106	218	?
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- A) 436      B) 443      C) 442      D) 224

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Puzzle 6. What comes next in the sequence?

4	10	18	28	40	54	?
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- A) 72      B) 68      C) 70      D) 56

Puzzle 7. What comes next in the sequence?

13	8	18	17	23	26	?
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- A) 28      B) 35      C) 29      D) 32

Puzzle 8. What comes next in the sequence?

30	41	53	64	76	87	99	?
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- A) 111      B) 110      C) 122      D) 109

Puzzle 9. What comes next in the sequence?

3	12	39	120	363	1092	?
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- A) 3276      B) 3279      C) 1095      D) 3280

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

3	6	12
4	8	16
4	12	?

- A) 36      B) 16      C) 15      D) 24

## Answer Key

1. **A) 343**

Sequence: 8, 27, 64, 125, 216, ... Cube roots: 2, 3, ...

6. **C) 70**

Formula:  $2 \times n(n+1)/2 + 2n$ .

2. **A) 76**

Sequence: 3, 13, 24, 34, 45, 55, 66, ...

7. **A) 28**

Two interleaved series – odd: +5, even: +9.

3. **C) 57**

Sequence: 19, 24, 30, 35, 41, 46, 52, ...

8. **B) 110**

Sequence: 30, 41, 53, 64, 76, 87, 99, ...

4. **A) 8**

Each row is a geometric sequence. Row 3 ratio:  $\times 2$ .

9. **B) 3279**

Sequence: 3, 12, 39, 120, 363, 1092, ...

5. **C) 442**

Sequence: 1, 8, 22, 50, 106, 218, ...

10. **A) 36**

Each row is a geometric sequence. Row 3 ratio:  $\times 3$ .