

## Pattern Puzzles – Pack 19

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

15	3	13	21	9	19	27	15	?
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A) 25	B) 21	C) 33	D) 26
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**Puzzle 2.** What comes next in the sequence?

8	2	13	16	6	19	24	10	?
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A) 14	B) 26	C) 32	D) 25
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**Puzzle 3.** What comes next in the sequence?

11	15	4	18	21	11	25	27	?
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A) 33	B) 18	C) 19	D) 32
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**Puzzle 4.** What comes next in the sequence?

14	42	38	114	110	330	326	978	?
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A) 974	B) 2935	C) 2934	D) 978
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**Puzzle 5.** What comes next in the sequence?

3	12	33	72	135	228	357	?
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A) 528	B) 522	C) 534	D) 486
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**Puzzle 6.** What comes next in the sequence?

5   14   32   68   140   284   ?

- A) 572   B) 284   C) 571   D) 568

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

14   28   16   32   20   40   28   56   ?

- A) 56   B) 112   C) 44   D) 113

**Puzzle 8.** What comes next in the sequence?

2   7   17   37   77   157   ?

- A) 316   B) 317   C) 157   D) 314

**Puzzle 9.** What comes next in the sequence?

9   10   13   22   49   130   373   ?

- A) 616   B) 1103   C) 1102   D) 859

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

8   24   58   116   204   328   494   ?

- A) 660   B) 708   C) 702   D) 714

## Answer Key

1. **A) 25**

Three interleaved arithmetic series (period 3).

6. **A) 572**

Rule:  $a(n) = 2 \times a(n-1) + 4$ .

2. **D) 25**

Three interleaved arithmetic series (period 3).

7. **B) 112**

Alternating:  $\times 2$  (odd steps),  $-12$  (even steps).

3. **B) 18**

Three interleaved arithmetic series (period 3).

8. **B) 317**

Rule:  $a(n) = 2 \times a(n-1) + 3$ .

4. **C) 2934**

Alternating:  $\times 3$  (odd steps),  $-4$  (even steps).

9. **C) 1102**

Differences form geometric sequence ( $\times 3$ ): 1, 3, 9, 27, 81, 243, 729.

5. **A) 528**

1st diffs: 9, 21, 39, 63, 93, 129.

10. **B) 708**

1st diffs: 16, 34, 58, 88, 124, 166.