

## Pattern Puzzles – Pack 43

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

3   9   27   63   123   213   339   ?

- A) 507   B) 513   C) 465   D) 501

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

13   27   55   103   177   283   427   ?

- A) 609   B) 615   C) 621   D) 571

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

15   4   13   20   8   17   25   12   ?

- A) 30   B) 16   C) 21   D) 22

**Puzzle 4.** What comes next in the sequence?

3   4   14   5   9   19   7   14   ?

- A) 25   B) 19   C) 9   D) 24

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

6   19   46   93   166   271   414   ?

- A) 557   B) 601   C) 607   D) 595

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**Puzzle 6.** What comes next in the sequence?

2	5	2	9	16	27	52	95	?
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|--------|--------|--------|--------|
| A) 147 | B) 174 | C) 122 | D) 198 |
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**Puzzle 7.** What comes next in the sequence?

4	3	3	10	16	29	55	100	?
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|--------|--------|--------|--------|
| A) 180 | B) 184 | C) 155 | D) 129 |
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**Puzzle 8.** What comes next in the sequence?

2	1	3	6	10	19	35	64	?
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|-------|-------|--------|--------|
| A) 99 | B) 83 | C) 132 | D) 118 |
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**Puzzle 9.** What comes next in the sequence?

18	36	26	52	42	84	74	148	?
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|--------|--------|--------|--------|
| A) 297 | B) 148 | C) 296 | D) 138 |
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**Puzzle 10.** What comes next in the sequence?

9	8	3	11	15	8	13	22	?
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|-------|-------|-------|-------|
| A) 15 | B) 14 | C) 29 | D) 13 |
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## Answer Key

1. **A) 507**  
1st diffs: 6, 18, 36, 60, 90, 126.
2. **B) 615**  
1st diffs: 14, 28, 48, 74, 106, 144.
3. **C) 21**  
Three interleaved arithmetic series (period 3).
4. **D) 24**  
Three interleaved arithmetic series (period 3).
5. **B) 601**  
1st diffs: 13, 27, 47, 73, 105, 143.
6. **B) 174**  
Rule:  $a(n) = a(n-1) + a(n-2) + a(n-3)$   
(tribonacci).
7. **B) 184**  
Rule:  $a(n) = a(n-1) + a(n-2) + a(n-3)$   
(tribonacci).
8. **D) 118**  
Rule:  $a(n) = a(n-1) + a(n-2) + a(n-3)$   
(tribonacci).
9. **C) 296**  
Alternating:  $\times 2$  (odd steps),  $-10$  (even steps).
10. **D) 13**  
Three interleaved arithmetic series (period 3).