

### Pattern Puzzles – Pack 10

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

2	4	10	28	82	244	730	?
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|---------|---------|---------|---------|
| A) 1216 | B) 1702 | C) 2190 | D) 2188 |
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**Puzzle 2.** What comes next in the sequence?

4	2	5	11	18	34	63	115	?
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|--------|--------|--------|--------|
| A) 170 | B) 212 | C) 149 | D) 178 |
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**Puzzle 3.** What comes next in the sequence?

6	14	36	78	146	246	384	?
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|--------|--------|--------|--------|
| A) 566 | B) 522 | C) 560 | D) 572 |
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**Puzzle 4.** What comes next in the sequence?

6	14	10	10	17	12	14	20	?
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|-------|-------|-------|-------|
| A) 18 | B) 15 | C) 23 | D) 14 |
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**Puzzle 5.** What comes next in the sequence?

1	10	33	76	145	246	385	?
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|--------|--------|--------|--------|
| A) 568 | B) 574 | C) 562 | D) 524 |
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**Puzzle 6.** What comes next in the sequence?

2	1	2	5	8	15	28	51	?
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|--------|-------|-------|-------|
| A) 109 | B) 94 | C) 79 | D) 66 |
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**Puzzle 7.** What comes next in the sequence?

5	13	7	7	15	10	9	17	?
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|-------|-------|-------|-------|
| A) 13 | B) 11 | C) 19 | D) 14 |
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**Puzzle 8.** What comes next in the sequence?

11	11	15	17	17	18	23	23	?
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|-------|-------|-------|-------|
| A) 21 | B) 29 | C) 20 | D) 22 |
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**Puzzle 9.** What comes next in the sequence?

2	9	23	51	107	219	?
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|--------|--------|--------|--------|
| A) 442 | B) 219 | C) 438 | D) 443 |
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**Puzzle 10.** What comes next in the sequence?

2	6	14	30	62	126	254	?
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|--------|--------|--------|--------|
| A) 382 | B) 510 | C) 502 | D) 514 |
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## Answer Key

**1. D) 2188**

Differences form geometric sequence ( $\times 3$ ): 2, 6, 18, 54, 162, 486, 1458.

**2. B) 212**

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

**3. A) 566**

1st diffs: 8, 22, 42, 68, 100, 138.

**4. D) 14**

Three interleaved arithmetic series (period 3).

**5. A) 568**

1st diffs: 9, 23, 43, 69, 101, 139.

**6. B) 94**

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

**7. A) 13**

Three interleaved arithmetic series (period 3).

**8. A) 21**

Three interleaved arithmetic series (period 3).

**9. D) 443**

Rule:  $a(n) = 2 \times a(n-1) + 5$ .

**10. B) 510**

Differences form geometric sequence ( $\times 2$ ): 4, 8, 16, 32, 64, 128, 256.