

Pattern Puzzles – Pack 51

Puzzle 1. What comes next in the sequence?

11	25	53	101	175	281	425	?
----	----	----	-----	-----	-----	-----	---

- | | | | |
|--------|--------|--------|--------|
| A) 619 | B) 613 | C) 607 | D) 569 |
|--------|--------|--------|--------|

Puzzle 2. What comes next in the sequence?

5	4	2	11	17	30	58	105	?
---	---	---	----	----	----	----	-----	---

- | | | | |
|--------|--------|--------|--------|
| A) 176 | B) 135 | C) 163 | D) 193 |
|--------|--------|--------|--------|

Puzzle 3. What comes next in the sequence?

3	4	7	16	43	124	367	?
---	---	---	----	----	-----	-----	---

- | | | | |
|--------|---------|---------|--------|
| A) 853 | B) 1096 | C) 1097 | D) 610 |
|--------|---------|---------|--------|

Puzzle 4. What comes next in the sequence?

9	13	21	37	69	133	261	?
---	----	----	----	----	-----	-----	---

- | | | | |
|--------|--------|--------|--------|
| A) 521 | B) 517 | C) 448 | D) 389 |
|--------|--------|--------|--------|

Puzzle 5. What comes next in the sequence?

6	10	4	10	12	11	14	14	?
---	----	---	----	----	----	----	----	---

- | | | | |
|-------|-------|-------|-------|
| A) 18 | B) 19 | C) 21 | D) 16 |
|-------|-------|-------|-------|

Pattern Puzzles – Pack 51

Puzzle 6. What comes next in the sequence?

14	8	7	16	16	14	18	24	?
----	---	---	----	----	----	----	----	---

- | | | | |
|-------|-------|-------|-------|
| A) 32 | B) 20 | C) 21 | D) 22 |
|-------|-------|-------|-------|

Puzzle 7. What comes next in the sequence?

14	9	7	16	16	15	18	23	?
----	---	---	----	----	----	----	----	---

- | | | | |
|-------|-------|-------|-------|
| A) 30 | B) 23 | C) 24 | D) 20 |
|-------|-------|-------|-------|

Puzzle 8. What comes next in the sequence?

18	54	50	150	146	438	434	1302	?
----	----	----	-----	-----	-----	-----	------	---

- | | | | |
|---------|---------|---------|---------|
| A) 3907 | B) 1298 | C) 1302 | D) 3906 |
|---------|---------|---------|---------|

Puzzle 9. What comes next in the sequence?

5	13	33	71	133	225	353	?
---	----	----	----	-----	-----	-----	---

- | | | | |
|--------|--------|--------|--------|
| A) 523 | B) 481 | C) 517 | D) 529 |
|--------|--------|--------|--------|

Puzzle 10. What comes next in the sequence?

8	16	10	20	14	28	22	44	?
---	----	----	----	----	----	----	----	---

- | | | | |
|-------|-------|-------|-------|
| A) 44 | B) 88 | C) 89 | D) 38 |
|-------|-------|-------|-------|

Answer Key

1. **B) 613**
1st diffs: 14, 28, 48, 74, 106, 144.
2. **D) 193**
Rule: $a(n) = a(n-1) + a(n-2) + a(n-3)$
(tribonacci).
3. **B) 1096**
Differences form geometric sequence ($\times 3$): 1, 3, 9, 27, 81, 243, 729.
4. **B) 517**
Differences form geometric sequence ($\times 2$): 4, 8, 16, 32, 64, 128, 256.
5. **A) 18**
Three interleaved arithmetic series (period 3).
6. **C) 21**
Three interleaved arithmetic series (period 3).
7. **B) 23**
Three interleaved arithmetic series (period 3).
8. **D) 3906**
Alternating: $\times 3$ (odd steps), -4 (even steps).
9. **A) 523**
1st diffs: 8, 20, 38, 62, 92, 128.
10. **B) 88**
Alternating: $\times 2$ (odd steps), -6 (even steps).