

Pattern Puzzles – Pack 29

Puzzle 1. What comes next in the sequence?

3	16	45	96	175	288	441	?
---	----	----	----	-----	-----	-----	---

A) 594	B) 640	C) 646	D) 634
--------	--------	--------	--------

Puzzle 2. What comes next in the sequence?

4	1	3	8	12	23	43	78	?
---	---	---	---	----	----	----	----	---

A) 121	B) 144	C) 101	D) 117
--------	--------	--------	--------

Puzzle 3. What comes next in the sequence?

3	18	51	108	195	318	483	?
---	----	----	-----	-----	-----	-----	---

A) 690	B) 702	C) 648	D) 696
--------	--------	--------	--------

Puzzle 4. What comes next in the sequence?

10	23	50	97	170	275	418	?
----	----	----	----	-----	-----	-----	---

A) 605	B) 561	C) 611	D) 599
--------	--------	--------	--------

Puzzle 5. What comes next in the sequence?

11	15	23	39	71	135	263	?
----	----	----	----	----	-----	-----	---

A) 391	B) 519	C) 473	D) 523
--------	--------	--------	--------

Pattern Puzzles – Pack 29

Puzzle 6. What comes next in the sequence?

11	33	23	69	59	177	167	501	?
----	----	----	----	----	-----	-----	-----	---

- | | | | |
|--------|---------|---------|--------|
| A) 491 | B) 1503 | C) 1504 | D) 501 |
|--------|---------|---------|--------|

Puzzle 7. What comes next in the sequence?

6	8	14	32	86	248	734	?
---	---	----	----	----	-----	-----	---

- | | | | |
|---------|---------|---------|---------|
| A) 2194 | B) 1220 | C) 2192 | D) 1706 |
|---------|---------|---------|---------|

Puzzle 8. What comes next in the sequence?

16	48	37	111	100	300	289	867	?
----	----	----	-----	-----	-----	-----	-----	---

- | | | | |
|---------|---------|--------|--------|
| A) 2602 | B) 2601 | C) 856 | D) 867 |
|---------|---------|--------|--------|

Puzzle 9. What comes next in the sequence?

13	11	7	18	13	10	23	15	?
----	----	---	----	----	----	----	----	---

- | | | | |
|-------|-------|-------|-------|
| A) 17 | B) 13 | C) 14 | D) 28 |
|-------|-------|-------|-------|

Puzzle 10. What comes next in the sequence?

9	8	4	17	14	11	25	20	?
---	---	---	----	----	----	----	----	---

- | | | | |
|-------|-------|-------|-------|
| A) 33 | B) 26 | C) 18 | D) 19 |
|-------|-------|-------|-------|

Answer Key

1. **B) 640**

1st diffs: 13, 29, 51, 79, 113, 153.

2. **B) 144**

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

3. **D) 696**

1st diffs: 15, 33, 57, 87, 123, 165.

4. **A) 605**

1st diffs: 13, 27, 47, 73, 105, 143.

5. **B) 519**

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

6. **B) 1503**

Alternating: $\times 3$ (odd steps), -10 (even steps).

7. **C) 2192**

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

8. **B) 2601**

Alternating: $\times 3$ (odd steps), -11 (even steps).

9. **B) 13**

Three interleaved arithmetic series (period 3).

10. **C) 18**

Three interleaved arithmetic series (period 3).