

Pattern Puzzles – Pack 48

Puzzle 1. What comes next in the sequence?

| | | | | | | | | |
|---|---|---|----|----|----|----|-----|---|
| 6 | 6 | 3 | 17 | 28 | 50 | 97 | 177 | ? |
|---|---|---|----|----|----|----|-----|---|

- A) 343
 B) 326
 C) 324
 D) 328

Puzzle 2. What comes next in the sequence?

| | | | | | | | | |
|---|---|---|----|----|----|----|-----|---|
| 3 | 6 | 4 | 15 | 27 | 48 | 92 | 169 | ? |
|---|---|---|----|----|----|----|-----|---|

- A) 328
 B) 309
 C) 313
 D) 311

Puzzle 3. What comes next in the sequence?

| | | | | | | | | | | | | |
|----|---|---|----|----|----|----|----|----|----|----|----|---|
| 15 | 6 | 7 | 12 | 18 | 10 | 10 | 14 | 21 | 14 | 13 | 16 | ? |
|----|---|---|----|----|----|----|----|----|----|----|----|---|

- A) 27
 B) 25
 C) 24
 D) 18

Puzzle 4. What number replaces the question mark in the grid?

| | | |
|----|----|----|
| 2 | 3 | 4 |
| 23 | 17 | 29 |
| 3 | 16 | ? |

- A) 3
 B) 13
 C) 15
 D) 12

Puzzle 5. What number replaces the question mark in the grid?

| | | |
|---|----|---|
| 3 | 3 | 9 |
| 4 | 15 | 2 |
| 8 | 3 | ? |

- A) 17
 B) 19
 C) 18
 D) 10

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Puzzle 6. What comes next in the sequence?

| | | | | | | | | | | | | |
|----|----|----|---|----|----|----|----|----|----|----|----|---|
| 11 | 11 | 12 | 5 | 17 | 15 | 15 | 13 | 23 | 19 | 18 | 21 | ? |
|----|----|----|---|----|----|----|----|----|----|----|----|---|

| | | | |
|-------|-------|-------|-------|
| A) 30 | B) 23 | C) 27 | D) 29 |
|-------|-------|-------|-------|

Puzzle 7. What comes next in the sequence?

| | | | | | | | | |
|---|---|---|----|----|----|----|-----|---|
| 6 | 2 | 6 | 15 | 24 | 46 | 86 | 157 | ? |
|---|---|---|----|----|----|----|-----|---|

| | | | |
|--------|--------|--------|--------|
| A) 290 | B) 291 | C) 289 | D) 240 |
|--------|--------|--------|--------|

Puzzle 8. What comes next in the sequence?

| | | | | | | | | | | | | |
|----|----|---|---|----|----|----|----|----|----|----|----|---|
| 10 | 15 | 9 | 7 | 14 | 18 | 13 | 13 | 18 | 21 | 17 | 19 | ? |
|----|----|---|---|----|----|----|----|----|----|----|----|---|

| | | | |
|-------|-------|-------|-------|
| A) 22 | B) 21 | C) 23 | D) 24 |
|-------|-------|-------|-------|

Puzzle 9. What comes next in the sequence?

| | | | | | | | | | | | | |
|---|----|---|---|----|----|----|----|----|----|----|----|---|
| 8 | 13 | 9 | 5 | 11 | 17 | 15 | 11 | 14 | 21 | 21 | 17 | ? |
|---|----|---|---|----|----|----|----|----|----|----|----|---|

| | | | |
|-------|-------|-------|-------|
| A) 18 | B) 25 | C) 17 | D) 14 |
|-------|-------|-------|-------|

Puzzle 10. What number replaces the question mark in the grid?

| | | |
|----|----|----|
| 5 | 2 | 8 |
| 5 | 18 | 26 |
| 11 | 8 | ? |

| | | | |
|------|------|------|------|
| A) 2 | B) 5 | C) 0 | D) 3 |
|------|------|------|------|

Answer Key

1. **B) 326**

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

2. **D) 311**

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

3. **C) 24**

Four interleaved arithmetic series (period 4):

4. **D) 12**

Column sums are triangular numbers: 28, 36, 45.

5. **A) 17**

Column sums are triangular numbers: 15, 21, 28.

6. **D) 29**

Four interleaved arithmetic series (period 4):

7. **A) 290**

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

8. **A) 22**

Four interleaved arithmetic series (period 4):

9. **C) 17**

Four interleaved arithmetic series (period 4):

10. **A) 2**

Column sums are triangular numbers: 21, 28, 36.