

Pattern Puzzles – Pack 21

Puzzle 1. What comes next in the sequence?

4	3	6	14	24	45	84	154	?
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- A) 283
 B) 284
 C) 295
 D) 285

Puzzle 2. What number replaces the question mark in the grid?

2	8	12
14	6	19
5	14	?

- A) 6
 B) 9
 C) 4
 D) 5

Puzzle 3. What comes next in the sequence?

3	4	6	15	27	50	94	173	?
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- A) 319
 B) 263
 C) 317
 D) 321

Puzzle 4. What comes next in the sequence?

2	4	6	15	28	52	98	181	?
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- A) 334
 B) 279
 C) 331
 D) 337

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

6	6	7
21	19	2
1	11	?

- A) 36
 B) 37
 C) 27
 D) 34

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Puzzle 6. What number replaces the question mark in the grid?

2	1	6
9	8	19
11	12	?

- A) 32 B) 27 C) 13 D) 26

Puzzle 7. What comes next in the sequence?

15	4	2	6	23	8	8	10	31	12	14	14	?
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- A) 40 B) 39 C) 16 D) 35

Puzzle 8. What number replaces the question mark in the grid?

1	2	6
5	5	15
5	11	?

- A) 49 B) 32 C) 48 D) 9

Puzzle 9. What comes next in the sequence?

2	4	4	12	22	40	76	140	?
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- A) 236 B) 258 C) 256 D) 260

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

2	1	6
1	3	12
13	10	?

- A) 34 B) 41 C) 42 D) 44

Answer Key

1. **B) 284**

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

6. **D) 26**

Row sums are perfect squares: 9, 36, 49.

2. **D) 5**

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

7. **B) 39**

Four interleaved arithmetic series (period 4):

3. **A) 319**

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

8. **C) 48**

Row sums are perfect squares: 9, 25, 64.

4. **A) 334**

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

9. **B) 258**

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

5. **A) 36**

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

10. **B) 41**

Row sums are perfect squares: 9, 16, 64.