

## Pattern Puzzles – Pack 22

**Puzzle 1.** What number replaces the question mark in the grid?

3	7	1
6	1	12
19	28	?

- A) 32     
  B) 33     
  C) 26     
  D) 23

**Puzzle 2.** What comes next in the sequence?

5	44	171	464	1025	1980	3479	5696	?
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- A) 5696     
  B) 8853     
  C) 8805     
  D) 8829

**Puzzle 3.** What comes next in the sequence?

6	10	3	7	8	15	6	10	10	20	9	13	?
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- A) 25     
  B) 15     
  C) 13     
  D) 12

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

4	4	8
8	9	32
11	6	?

- A) 48     
  B) 32     
  C) 14     
  D) 47

**Puzzle 5.** What comes next in the sequence?

4	34	138	388	880	1734	3094	5128	?
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- A) 8052     
  B) 8004     
  C) 5128     
  D) 8028

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**Puzzle 6.** What comes next in the sequence?

6	5	5	4	8	8	8	12	10	11	11	20	?
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A) 12	B) 13	C) 14	D) 7
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**Puzzle 7.** What number replaces the question mark in the grid?

3	2	11
3	8	25
4	15	?

A) 46	B) 25	C) 45	D) 17
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**Puzzle 8.** What number replaces the question mark in the grid?

6	4	15
8	7	21
13	16	?

A) 7	B) 35	C) 24	D) 36
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**Puzzle 9.** What comes next in the sequence?

13	6	12	3	19	12	19	5	25	18	26	7	?
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A) 32	B) 24	C) 31	D) 36
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**Puzzle 10.** What comes next in the sequence?

9	9	4	8	14	17	6	15	19	25	8	22	?
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A) 33	B) 27	C) 25	D) 24
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## Answer Key

1. **A) 32**

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

6. **A) 12**

Four interleaved arithmetic series (period 4):

2. **D) 8829**

4th differences are all 24 (quartic sequence).

7. **C) 45**

Row sums are perfect squares: 16, 36, 64.

3. **D) 12**

Four interleaved arithmetic series (period 4):

8. **B) 35**

Row sums are perfect squares: 25, 36, 64.

4. **D) 47**

Row sums are perfect squares: 16, 49, 64.

9. **C) 31**

Four interleaved arithmetic series (period 4):

5. **D) 8028**

4th differences are all 24 (quartic sequence).

10. **D) 24**

Four interleaved arithmetic series (period 4):