

Number Series and Patterns

Circle the letter of the best answer.

Name _____

Date _____

1. Complete the series: 59, 71, 83, 95, 107, ____

A) 131

B) 95

C) 117

D) 119

Working

2. Look at this series: 3, 12, 48, 192. What is the next number?

A) 772

B) 768

C) 1340

D) 960

Working

3. Work out the next number in the series: 9, 16, 25, 36

A) 49

B) 26

C) 42

D) 47

Working

4. Continue the pattern: 13, 7, 1, -5, -11, ?

A) -19

B) -18

C) -17

D) -29

Working

5. Fill in the gap in this series: 6, 9, __, 24, 36

A) 19

B) 18

C) 16

D) 15

Working

6. What is the next value in this number series: 26, 33, 31, 38, 36, 43?

A) 41 B) 42 C) 50 D) 52

Working

7. In this series, one term is wrong: 4, 7, 10, 13, 18, 19. Which number is it?

A) 19 B) 18 C) 4 D) 13

Working

8. The next term in this series 24, 31, 40, 51, 64 is:

A) 82 B) 81 C) 79 D) 80

Working

9. This series is shown from its second term onwards: 47, 50, 53, 56. What number must have come right before it?

A) 41 B) 47 C) 50 D) 44

Working

10. Every term in a series is formed by doubling the one before it and then subtracting 4. If the 4th term is 36, what was the 1st term?

A) 8 B) 6 C) 12 D) 7

Working

Answer key — fold under before giving this to a child

1. D 2. B 3. A 4. C 5. D 6. A 7. B 8. C 9. D 10. A

1. D) 119

The series increases by 12 every time, so the next term is $107 + 12 = 119$.

2. B) 768

Each term is 4 times the one before it, so 192 multiplied by 4 gives 768.

3. A) 49

These are square numbers ($3^2, 4^2, 5^2, 6^2$), so the next one is $7^2 = 49$.

4. C) -17

The series keeps falling by 6, continuing past zero into negative numbers, so the next term is $-11 - 6 = -17$.

5. D) 15

The gaps grow by 3 each time: 3, 6, 9, 12. So the missing term is $9 + 6 = 15$. Check: $15 + 9 = 24$ and $24 + 12 = 36$.

6. A) 41

The series alternately adds 7 and subtracts 2; the next step should subtract 2, giving 41.

7. B) 18

Each term should be 3 more than the last: 4, 7, 10, 13, 16, 19. The fifth term should be 16, so 18 is the wrong one.

8. C) 79

The gaps between the terms grow by 2 each time (7, 9, 11, 13), so the next gap is 15, giving $64 + 15 = 79$.

9. D) 44

Each term is 3 more than the one before, so working backwards, the missing first term is $47 - 3 = 44$.

10. A) 8

Work backwards by adding 4 and halving: the 4th term 36 came from 20, which came from 12, which came from 8. Check forwards: 8, 12, 20, 36.