MATHEMATICS · GRADES 4-6

Number patterns and sequences

Difficulty level: Intermediate

Mathematics: Grades 4-6

This document was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

Overview of the concept

This is how you predict what comes next, from the next number in a game to how many seats you need when each new row adds the same amount. A theatre manager works out how many seats a new row adds, and a cook works out how many portions each new batch makes. Patterns like this show up in saving plans too, where each month adds the same amount to the total. Spotting the pattern early means you can plan ahead instead of counting one step at a time.



© 2026 Brett Robbins. All Rights Reserved.

Worked examples

EXAMPLE 1

Q 3, 6, 9, 12, ?, ?

SOLUTION

3 -> 6 -> 9 -> 12

+3 +3 +3

Next: 15, 18

Look at the gaps: 6 - 3 = 3, 9 - 6 = 3, 12 - 9 = 3

The rule is add 3 each time.

Continue: 12 + 3 = 15, then 15 + 3 = 18

EXAMPLE 2

Q 40, 36, 32, 28, ?, ?

SOLUTION

40 -> 36 -> 32 -> 28

-4 -4 -4

Next: 24, 20

Look at the gaps: 36 - 40 = -4 each time.

The rule is subtract 4 each time.

Continue: 28 - 4 = 24, then 24 - 4 = 20

© 2026 Brett Robbins. All Rights Reserved.

Practice questions

1 Continue the pattern 5, 10, 15, 20. What are the next two numbers?

- A 25, 30
- B 20, 25
- C 25, 35
- D 30, 35

Understand It with Pulse | Flag a mistake

2 Continue the pattern 50, 45, 40, 35. What are the next two numbers?

- A 30, 25
- B 25, 20
- C 35, 30
- D 30, 20

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

3 Continue the pattern 2, 4, 8, 16. What are the next two numbers?

- A 16, 32
- B 32, 64
- C 64, 128
- D 32, 32

Understand It with Pulse | Flag a mistake

4 The numbers go 4, 8, 12, 16. What is the 10th number in the pattern?

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

5 What number comes just before 100 in the pattern 100, 95, 90, 85?

Understand It with Pulse | Flag a mistake

6 The numbers go 6, 12, 18, 24. What is the rule?

A. Add 6 each time

B. Multiply by 6 each time

C. Add 12 each time

D. Multiply by 2 each time

Understand It with Pulse | Flag a mistake

7 The numbers go 60, 55, 50, 45. Count on in the pattern. How many numbers are there from 60 down to 0, including 0?

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

8 A pattern triples each time: 3, 9, 27, 81. Which number does NOT belong in the pattern?

- A 240
- B 81
- C 27
- D 9

Understand It with Pulse | Flag a mistake

9 What is the missing number in the pattern 11, 22, ?, 44?

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

10 A pattern starts at 90 and subtracts 10 each time. What are the first four numbers?

- **A** 90, 80, 70, 60
- **B** 90, 80, 60, 40
- **C** 100, 90, 80, 70
- **D** 90, 100, 110, 120

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

ANSWER KEY

1. 25, 30

2. 30, 25

3. 32, 64

4. 40

5. 105

6. Add 6 each time

7. 13

8. 240

9. 33

10. 90, 80, 70, 60

© 2026 Brett Robbins. All Rights Reserved.