

## Lesson 5: Number Patterns in Sequence

**Purpose of Lesson:** You will complete number patterns by discovering the rule.



2, 4, 6, 8, who do we appreciate?

Go, team, GO

Remember those cheers? Well, you were using **Number Patterns in Sequence**.

**Number sequences** are a series of numbers that follow a certain pattern. We know that the next number in the sequence 2, 4, 6, 8... would be 10. The digits are all even, and you can add 2 to any digit in the sequence to get the next one.

What would be the next number in this sequence? 0, 5, 10, 15...

Yes, 20 would come next. The difference between the digits is five. The sequence **increases** between each number by 5 units. You might think of it as counting by 5's, or *adding* five to each number.

The **mathematical function** is addition. **The rule** is +5.

The **mathematical functions** are:  
addition, subtraction,  
multiplication,  
division.



**Take Lesson 5 Quiz 1**

Let's try a sequence of **decreasing** value: 40, 32, 24, 16...

Did you say 8? If you did, you noticed that the numbers are decreasing by 8. In other words, eight is *subtracted* from each number.

The **mathematical function** is subtraction. The **rule** is -8.

### Take Lesson 5 Quiz 2

### Take Lesson 5 Quiz 3

Sometimes a pattern will have two or more differences between numbers.

Look at this example: 1, 4, 3, 6, 5, 8...

To solve this, you might want to write the **mathematical function** (*addition, subtraction, multiplication, or division*) between each digit:

1, **(+3)** 4, **(-1)** 3, **(+3)** 6, **(-1)** 5, **(+3)** 8...

So the pattern is: add 3 (three), subtract 1 (one). The **rule** this time has two *functions* (addition and subtraction), the next number is 7 ( $8-1$ ), and then 10 ( $7+3$ ).

The complete pattern is 1, 4, 3, 6, 5, 8, **7, 10**.

Finding patterns and solving sequences is a fun way to stretch your brain with logic and math skills.

*Try completing these sequences without my help! Write in the function, or rule, that you use to solve the sequence.*



[Take Lesson 5 Quiz 4](#)

[Take Lesson 5 Quiz 5](#)