

## Maths

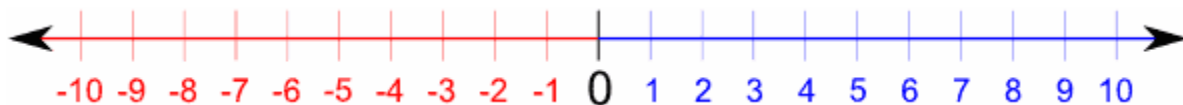
# Using Positive and Negative Numbers

**Positive numbers** are the numbers that you use every day. Examples of positive numbers are the amount in your bank account or the temperature that the weather forecaster gives you on the news.

Sometimes the above situations give rise to **negative numbers**. This is where you go overdrawn on your bank account, or where the temperature goes below freezing.

### Adding Positive and Negative Numbers

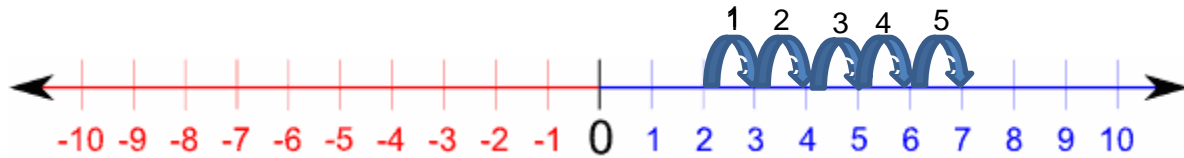
You can represent both positive and negative numbers on a number line. When you are adding you move to the right.



The numbers below zero are negative.

### Example 1

Use a number line to work out  $2 + 5$ .



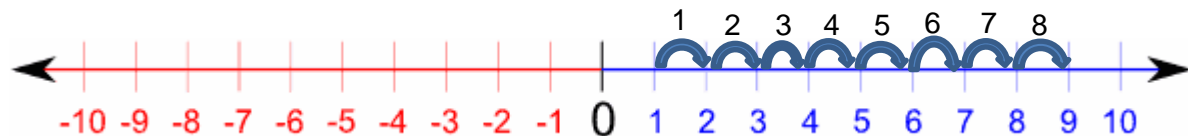
Start at 2, and because you are adding count five spaces to the right. You should end at 7.

$$2 + 5 = 7$$

### Question 1

Work out  $1 + 8$  using a number line.

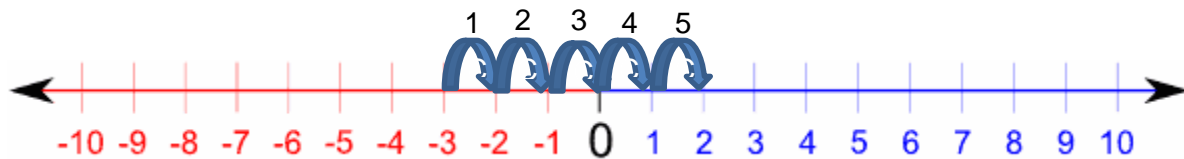
Answer



$$1 + 8 = 9$$

## Example 2

Use a number line to work out  $-3 + 5$ .



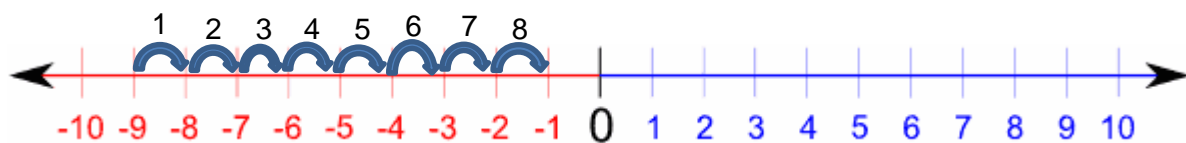
Start at -3, and because you are adding count five spaces to the right. You should end at 2.

$$-3 + 5 = 2$$

## Question 2

Work out  $-9 + 8$  using a number line.

Answer



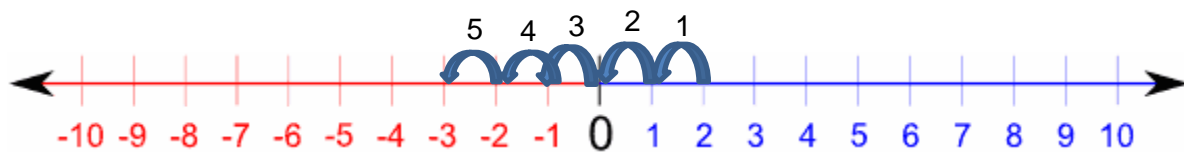
$$-9 + 8 = -1$$

## Subtracting Positive Numbers

When you are subtracting positive numbers using a number line, you move to the left.

### Example 3

Use a number line to work out  $2 - 5$ .



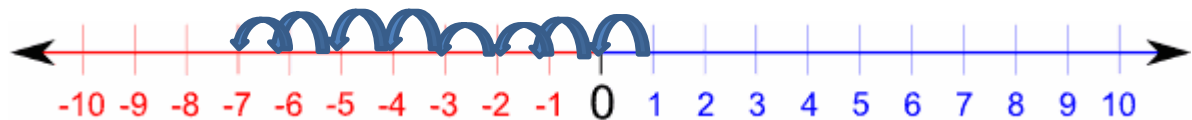
Start at 2, and because you are subtracting count five spaces to the left. You should end at -3.

$$2 - 5 = -3$$

### Question 3

Work out  $1 - 8$  using a number line.

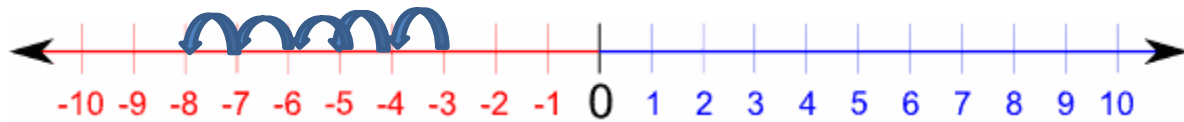
Answer



$$1 - 8 = -7$$

### Example 4

Use a number line to work out  $-3 - 5$ .



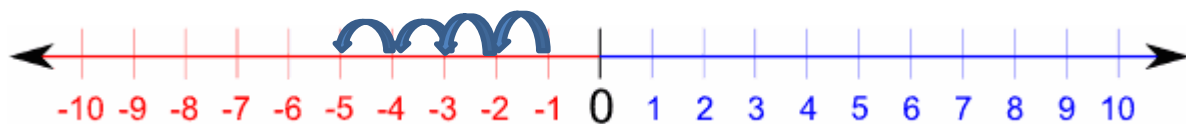
Start at -3, and because you are subtracting count five spaces to the left. You should end at -8.

$$-3 - 5 = -8$$

### Question 4

Work out  $-1 - 4$  using a number line.

Answer



$$-1 - 4 = -5$$

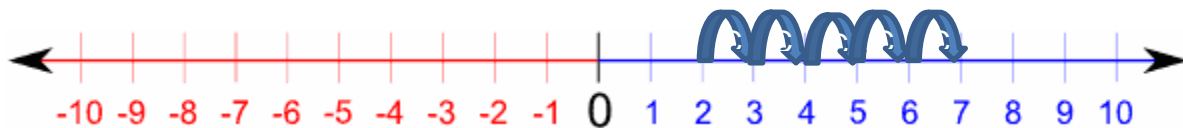
## Subtracting Negative Numbers

When you are subtracting negative numbers using a number line, the negatives cancel out to make a positive.

### Example 5

Use a number line to work out  $2 - - 5$ .

Here there are two minuses together. When they combine they make a positive. So  $2 - - 5 = 2 + 5$ .



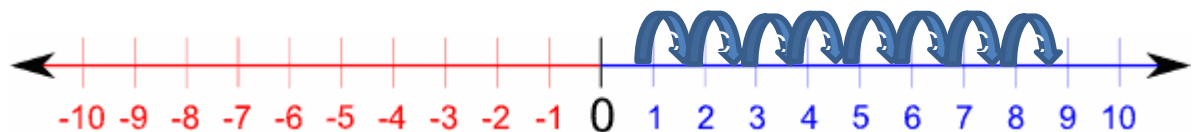
Start at 2, and because you are subtracting a negative (which is a positive) count five spaces to the right. You should end at 7.

$$2 - - 5 = 2 + 5 = 7$$

### Question 5

Work out  $1 - - 8$  using a number line.

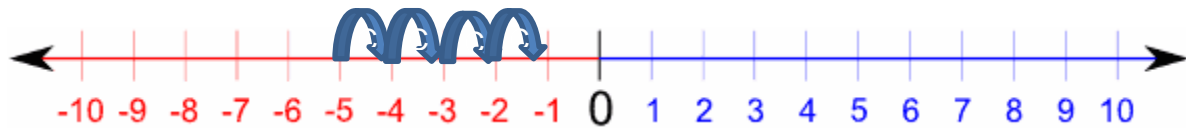
Answer



$$1 - - 8 = 1 + 8 = 9$$

### **Example 6**

Use a number line to work out  $-5 - -4$ .



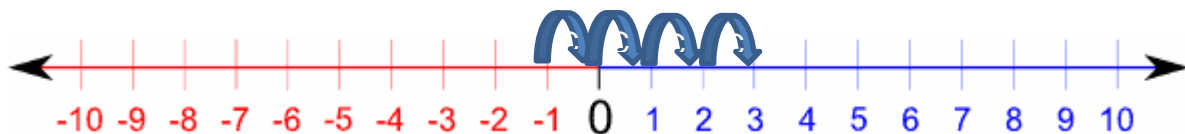
Start at -5, and because you are subtracting a negative number count four spaces to the right. You should end at -1.

$$-5 - -4 = -5 + 4 = -1$$

### **Question 6**

Work out  $-1 - -4$  using a number line.

**Answer**



$$-1 - -4 = -1 + 4 = 3$$

## **Useful You Tube Links**

<https://www.youtube.com/watch?v=vGv55ubVc-c>

<https://www.youtube.com/watch?v=yNL13-DhRRw>

<https://www.youtube.com/watch?v=cPzwLPfNZmc>

## **Useful Web Page Links**

<http://math.about.com/od/prealgebra/ht/PostiveNeg.htm>

<http://www.mathsisfun.com/positive-negative-integers.html>

<http://www.purplemath.com/modules/negative2.htm>