Adding Real Numbers

We all are familiar with adding whole numbers. Real numbers can be positive numbers, negative numbers, decimals, and fractions. We mostly focus first on adding positive and negative numbers. This is a very important skill to fine-tune and practice often.

Recall that $5 + 2 = 7$. If we look at a number line, we can see how we move along it to find the answer.

![Number Line Diagram]

Start at 5, and move 2 places towards the positive direction since we are adding 2.

If we were to add a negative 2, that is to evaluate $5 + (-2)$, we would start at 5 and add a -2, moving in the negative direction.

![Number Line Diagram]

Another way to look at adding positive and negative numbers is by thinking of money. For example, if you have 5 dollars and are adding 2 dollars to it, you know you have 7 dollars. The other example is that you have 5 dollars, then add to that account an expenditure of 2 dollars, you can think about where your account is at. You would have spent 2 dollars, so have 3 dollars left.
Let’s look at some more examples and think of them in terms of money. Always read the numbers from left to right.

**Example**

a.) \(-5 + (-9)\)

a.) Here, we start with a debt of 5 dollars. Then we add to that a debt of 9 dollars. So where are we at? We will be in even more debt, at 14 dollars. So the answer is \(-14\).

b.) \(-1 + (-3)\)

b.) Here we start with a debt of 1 dollar. We add to that a debt of 3 dollars. So where are we at? We will be in even more debt, at 4 dollars. So the answer is \(-4\).

c.) \(-1 + (-10)\)

c.) Here we start with a debt of 1 dollar. We add to that a debt of 10 dollars. So where are we at? We will be in even more debt, at 11 dollars. So the answer is \(-11\).

d.) \(-2 + (-8)\)

d.) Here we start with a debt of 2 dollars. We add to that a debt of 8 dollars. So where are we at? We will be in even more debt, at 10 dollars. So the answer is \(-10\).
**Practice Problems**
You try these. Answers will be provided at the end of the section.

1.) \(-3 + (-8)\)  
2.) \(-4 + (-6)\)  
3.) \(-1 + (-4)\)  
4.) \(-10 + (-9)\)  
5.) \(-11 + (-17)\)

Let’s try some different examples using the same idea.

**Example**

a.) \(-5 + 6\)

a.) Here, we start with a debt of 5 dollars. Then we add to that amount 6 dollars. So where are we at? We are in the positive, at 1 dollar. So the answer is 1.

b.) \(-2 + 9\)

b.) Here, we start with a debt of 2 dollars. Then we add to that amount 9 dollars. So where are we at? We are in the positive, at 7 dollars. So the answer is 7.

c.) \(14 + (-10)\)

c.) Here we start with 14 dollars. We spend, or take from that, 10 dollars. So where are we at? We will be in the positive, at 4 dollars. So the answer is 4.

d.) \(2 + (-7)\)

d.) Here we start with 2 dollars. We spend, or take from that, 7 dollars. So where are we at? We will be in debt, at 5 dollars in the negative. So the answer is \(-5\).
Practice Problems
You try these. Answers will be provided at the end of the section.

6.) \(-9 + 10\)  
7.) \(-5 + 9\)  
8.) \(1 + (-4)\)  
9.) \(10 + (-3)\)  
10.) \(11 + (-7)\)
Answers to practice problems:

1.) –11
2.) –10
3.) –5
4.) –19
5.) –28
6.) 1
7.) 4
8.) –3
9.) 7
10.) 4