Notes on Using

A Number Line

\* **Positive** numbers are located to the **right** of 0.

\* **Negative** numbers are located to the **left** of 0.

\* **Zero** is “the middle” of our number line. It is **neither** positive nor negative.

\* **Opposites** are numbers that are the same distance from 0 but on different (opposite) sides of 0. For example, -2 and 2 are opposites since both numbers are exactly 2 units from 0. Likewise, -4.3 and 4.3, as well as -10 ½ and 10 ½, are opposites as well.

\* The **absolute value** a number tells us how far a number is from 0. Or, in other words, the distance from that number to 0. The symbols used for absolute value is $\left|\right|,$ with a number inside the square in the middle of the vertical bars. For example, the absolute value of 6, shown as $\left|6\right|,$ is 6 since it is exactly 6 units from 0. Likewise $\left|-10\right|$ = 10 since -10 is exactly 10 units from 0. Because we are talking about the distance a number is from 0, ABSOLUTE VALUE IS ALWAYS A POSITIVE NUMBER.

\* An **integer** are numbers that you can consider positive and negative “counting numbers,” including 0. Numbers like -2, 3, 0, -45, and 236 are all examples of integers. Numbers like 2.1 and -3 ½ are NOT integers since one contains a decimal, and the other one contains a fraction.

\* **The further a number is to the left on a number line, the SMALLER the number.** For example, -6 is less than -2 since it is further to the left of 0 than -2 is. Likewise, 2 is less than 3 since it is located further to the left.

\* Words the mean either positive or negative.

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| **POSITIVE** | **NEGATIVE** |
| deposit | withdrawal |
| credit | debit |
| increase | decrease |
| above | below |
|  | behind |
|  | owes |