Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_

Mr. Tallman Math 7-8 A

**Do Now**

**In the space below, list as many opposites as you can think of.**

**Lesson #1 – Integers and Absolute Value**

**Use the key words in the word bank below to fill in the ovals in the graphic organizer. You may put more than one word in each oval.**

|  |
| --- |
| **Word Bank** |
| Opposites | Positive Numbers | Negative Numbers | Whole Numbers |

Understanding Integers

**Let’s review positive and negative numbers:**

Use the Venn diagram below to record what you know about positive and negative numbers.

Positive Numbers

Negative Numbers

\*\*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is neither positive nor negative\*\*

|  |  |
| --- | --- |
| **Negative** | **Positive** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**Integer Concepts**

Sort out each word below into either the positive or negative column.

**Now, You Try!**

**Write an integer to represent each of the following situations.**

|  |  |
| --- | --- |
| 1) a loss of $200 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 2) 85 feet below sea level \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 3) a deposit of $150 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 4) a withdrawal of $20 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**Absolute Value**

The **absolute value** of an integer is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* The distance from 0 to 5 units $\left|5\right|$ = \_\_\_\_\_\_\_\_\_\_\_
* The distance from 0 to – 5 units $\left|-5\right|= $\_\_\_\_\_\_\_\_\_



Can absolute value ever be negative? Justify. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Now, You Try!**

Simplify the following:

|  |  |  |
| --- | --- | --- |
| 5) $\left|-8\right|=$ \_\_\_\_\_\_\_\_\_\_ | 6) $\left|6\right|=$ \_\_\_\_\_\_\_\_\_\_ | 7) $-\left|-8\right|=$ \_\_\_\_\_\_\_\_\_\_ |

Compare the following using $<, >or=$.

|  |  |  |
| --- | --- | --- |
| 8) $\left|-2\right| \\_\\_\\_\\_\\_\\_\\_\\_\\_\\_-1$ | 9) $-7\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\left|6\right|$ | 10) $9\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\left|-9\right|$ |

**Math in the Real World**

10) Is the freezing point of airplane fuel or candle wax closer to the freezing point of water ($0°)$? Explain your reasoning.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_