Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ HR: \_\_\_\_\_\_\_\_\_

**WARM UP: Real-World Positive & Negative Integers and Zero**

**Directions:**

1. Read the paragraph below silently.
2. Underline or highlight any words you associate with numbers.
3. Write down positive words you know in the first column.
4. In the second column, write down negative words you know.
5. In the last column, write down words you do not know.

 *For Tim’s 13th birthday, he received $150 in cash from his mom. His dad took him to the bank to open a savings account. Tim gave the cash to the banker to deposit into the account. The banker credited Tim’s new account $150 and gave Tim a receipt. One week later, Tim deposited another $25 that he earned as allowance. The next month, Tim’s dad gave him permission to withdraw $35 to buy a new video game. Tim’s dad explained that the bank would charge a $5 fee for each withdrawal from the savings account and that each withdrawal and charge results in a debit to the account.*

|  |  |  |
| --- | --- | --- |
| **Positive Words I Know** | **Negative Words I know** | **Words I don’t Know** |
|  |  |  |

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ HR: \_\_\_\_\_\_\_\_\_

**Lesson 2: Real-World Positive & Negative Integers and Zero**

1. Write each individual description below as an integer. Model the integer on the number line using an appropriate scale.

|  |  |  |
| --- | --- | --- |
| **Event** | **Integer** | **Number Line Model** |
| Open a bank account with $0. |  |  |
| Make a $150 deposit. |  |  |
| Credit an account for $150. |  |  |
| Make a deposit of $25. |  |  |
| A bank makes a charge of $5. |  |  |
| Tim withdrawals $35. |  |  |

2. Write each word under the appropriate column, “Positive Number” or “Negative Number.”

*Gain Loss Deposit Credit Debit*

*Charge Below Zero Withdrawal Owe Receive*

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

3. Write an integer to represent each of the following situations:

 a. A company loses $345,000 in 2015. \_\_\_\_\_\_\_\_\_\_

 b. You earned $25 for dog sitting. \_\_\_\_\_\_\_\_\_\_

 c. Jacob owes his dad $5. \_\_\_\_\_\_\_\_\_\_

 d. The temperature at the sun’s surface is about 5,500°C. \_\_\_\_\_\_\_\_\_\_

 e. The temperature outside is 4 degrees below zero. \_\_\_\_\_\_\_\_\_\_

 f. A football player lost 10 yards when he was tackled. \_\_\_\_\_\_\_\_\_\_

4. Describe a situation that can be modeled by the integer -15. Explain what zero represents in the situation.

5. Temperature is commonly measured using one of two scales, Celsius or Fahrenheit. In the United States, the Fahrenheit system continues to be the accepted standard for nonscientific use. All other countries have adopted Celsius as the primary scale in use. The thermometer shows how both scales are related.

* 1. The boiling point of water is $100℃$. Where is $100 $degrees Celsius located on the thermometer to the right?

Freezing point of water in $℃$

* 1. On a vertical number line, describe the position of the integer that represents$ 100℃$.
	2. Write each temperature as an integer.
		1. The temperature shown on the thermometer in degrees Fahrenheit:
		2. The temperature shown on the thermometer in degrees Celsius:
		3. The freezing point of water in degrees Celsius:
	3. If someone tells you your body temperature is $98.6°$, what scale is being used? How do you know?
	4. Does the temperature $0 $degrees mean the same thing on both scales?

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ HR: \_\_\_\_\_\_\_\_

**HOMEWORK:** **Real-World Positive & Negative Integers**

Express each situation as an integer.

1. A gain of 56 points in a game. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. A fee charged of $2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. A temperature of 32 degrees below zero. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. A 56-yard loss in a football game. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. The freezing point of water is zero degrees Celsius. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. A $12,500 deposit. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. A $250 withdrawal from a bank account. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. The scuba diver is 30 feet below sea level. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. The sailor is at sea level. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. The hiker is 2 miles above sea level. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
11. A debit of $40. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
12. A deposit of $225. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
13. 14,000 feet above sea level. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
14. A withdrawal of $225. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
15. 14,000 feet below sea level. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Use the thermometer on the right to answer the questions**

Each sentence is stated *incorrectly*. Rewrite the sentence to correctly describe each situation.

 The temperature is $-10$ degrees Fahrenheit below zero.

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

 The temperature is $-22$ degrees Celsius below zero.

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

Mark the integer on the thermometer that corresponds to the temperature

given.

* 1. $70°F$
	2. $12℃$
	3. $110℉$
	4. $-4℃$

The boiling point of water is $212°F$. Can this thermometer be used to record the temperature of a boiling pot of water? Explain.

Kaylon shaded the thermometer to represent a temperature of $20$ degrees below zero Celsius as shown in the diagram. Is she correct? Why or why not? If necessary, describe how you would fix Kaylon’s shading.