Lesson 2: Real-World Positive and Negative Numbers and Zero

Classwork

Exercises 1-4

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 withdraws $35.		

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

    Gain   Loss   Deposit   Credit   Debit   Charge   Below Zero   Withdraw   Owe   Receive

Positive Number	Negative Number

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

    a. A company loses $345,000 in 2011.   _____

    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.

Problem Set

1. Express each situation as an integer in the space provided.

   a. A gain of 56 points in a game   _____

   b. A fee charged of $2   _____

   c. A temperature of 32 degrees below zero   _____

   d. A 56-yard loss in a football game   _____

   e. The freezing point of water in degrees Celsius   _____

   f. A $12,500 deposit   _____

For Problems 2–5, use the thermometer to the right.

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

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

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

3. Mark the integer on the thermometer that corresponds to the temperature given.

   a. 70°F

   b. 12°C

   c. 110°F

   d. -4°C

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.

5. 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.