Name _____

1. **Vocabulary** How are integers and their opposites related? Give an example.

   Sample answer: They are on opposite sides of 0 on a number line and combine to make 0. For example, $5 + (-5) = 0$.

2. A dive ring on the bottom of the pool is 10 feet below the surface of the water. Sabine dives down and brings the ring back to the surface. What integer represents the dive ring's final position with respect to the surface of the water?

   0

3. Antony borrows $6.50 from a friend to pay for a sandwich and drink at lunch. Then he borrows $3.75 from his sister to pay a library fine. Using negative numbers, write an equation to express Antony's total debt that day.

   $-\$6.50 + (-\$3.75) = -\$10.25$

4. The temperature at noon at a ski resort is 3°F. The temperature drops 8°F by midnight. What is the temperature at midnight?

   $3 - 8 = 3 + (-8) = -5; -5°F$

5. Hannah says that 2.11 is a rational number. Gus says that 2.11 is a repeating decimal. Who is correct and why?

   Hannah; Sample answer: 2.11 is a terminating decimal that can be written as $2\frac{11}{100}$. Rational numbers can be expressed as fractions.

6. Juan is walking up a hill at $130\frac{3}{4}$ feet above sea level when he kicks a pebble. If the pebble falls to the base of the hill, which is 18.5 feet below sea level, what is the vertical distance that the pebble fell?

   Ⓐ 111.75 feet   Ⓒ 148.75 feet

   Ⓑ $112\frac{1}{4}$ feet   **Ⓓ** $149\frac{1}{4}$ feet