

Name _____

Due Date _____

Signed Numbers Study Guide

Q1: Name the opposite of each integer.

| Integer | Opposite |
|---------|----------------------|
| 19 | <input type="text"/> |
| -1 | <input type="text"/> |
| -15 | <input type="text"/> |
| 3 | <input type="text"/> |

Q2: Identify whether each number belongs to the given set. Put a check in each box that is true.

| Number | Natural Numbers | Whole Numbers | Integers | Rational Numbers |
|----------------|--------------------------|--------------------------|--------------------------|--------------------------|
| $-\frac{2}{3}$ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| -4 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 0 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Q3: Consider the following numbers.

-9, 1, 8, 0, -6, -3, 5, -1

Part A

Plot each number on the number line shown below.

Part B

How do you know that each number that you plotted is an integer?

Part C

Which number that you plotted has the smallest value? How do you know?

Part D

Which pair of numbers that you plotted are opposites? Explain how you can tell.



Q4: Determine a rational number between each pair of numbers.

Part A

$9\frac{1}{2}$ and $9\frac{2}{3}$

Part B

-8.16 and -8.17

Q5: Order the set of numbers from least to greatest.

-6 , 12.8 , $-1\frac{4}{5}$, -27.125 , $29\frac{1}{9}$

Q6: Order the set of numbers from least to greatest.

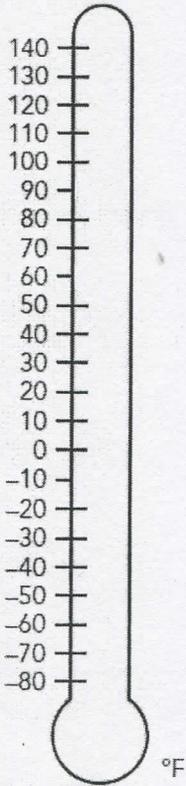
12 , -6.6 , $8\frac{4}{9}$, -10.5 , $-9\frac{5}{6}$

Q7: Complete each statement. Show your work.

| Statement | Value |
|---|----------------------|
| $ 14 + -3 = \underline{\hspace{2cm}}$ | <input type="text"/> |
| The opposite of 8 is $\underline{\hspace{2cm}}$. | <input type="text"/> |
| $ 0 + 15 = \underline{\hspace{2cm}}$ | <input type="text"/> |
| $ 6 - -6 = \underline{\hspace{2cm}}$ | <input type="text"/> |

Q8: Plot the following temperatures on the thermometer:

-25°F , 5°F , 60°F , -45°F , -10°F , 90°F



Part B

Order the temperatures from greatest to least.

Part C

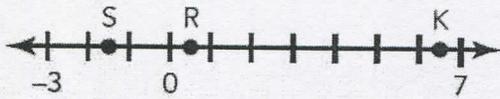
What is the temperature change between the greatest value and the least value? Show your work.

Q9: Kathryn, Shane, and Robbie are going out for lunch. The hamburger, French fries, and drink combo meals they all want to buy are \$6.50 each.

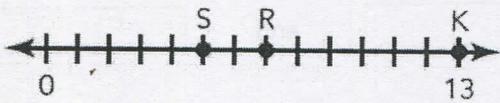
- Kathryn: I have enough money to buy two combo meals.
- Shane: I need \$1.50 more to buy a combo meal.
- Robbie: I will get 50 cents back in change from buying my combo meal.

Omar and Bindi created a number line to represent the scenario.

Omar's number line:



Bindi's number line:



Part A

Explain what 0 and each point on Omar's number line represent.

Part B

Explain what 0 and each point on Bindi's number line represent.

Q10: A company's profit and loss for 10 weeks are shown in the table. Losses are represented by amounts within parentheses.

| Week | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------|----------|------------|----------|------------|-----------|----------|----------|-----------|----------|----------|
| Profit or Loss | \$175.21 | (\$216.79) | \$323.83 | (\$451.62) | (\$10.95) | \$276.52 | \$104.61 | (\$97.82) | \$263.17 | \$412.00 |

Part A

Rewrite the loss amounts in the table as negative numbers.

Part B

Between which two weeks did the company have the largest gain in money? What was this gain? Show your work.

The company had the largest gain between weeks and

It was a gain of

Part C

What was the difference between the company's best week and their worst week? Show your work.

Part D

Which week showed the value furthest from 0?

Week