

Lesson 10: Writing and Interpreting Inequality Statements Involving Rational Numbers

Classwork

Exercises 1-5

1. Mark's favorite football team lost yards on two back-to-back plays. They lost 3 yards on the first play. They lost 1 yard on the second play. Write an inequality statement using integers to compare the forward progress made on each play.
2. Sierra had to pay the school for two textbooks that she lost. One textbook cost \$55, and the other cost \$75. Her mother wrote two separate checks for each expense. Write two integers that represent the change to her mother's checking account balance. Then, write an inequality statement that shows the relationship between these two numbers.
3. Jason ordered the numbers -70 , -18 , and -18.5 from least to greatest by writing the following statement:
 $-18 < -18.5 < -70$.
Is this a true statement? Explain.
4. Write a real-world situation that is represented by the following inequality: $-19 < 40$. Explain the position of the numbers on a number line.

5. Look at the following two examples from the Sprint.

$\square < \square < \square$ $-\frac{1}{4}, -1, 0$
$\square > \square > \square$ $-\frac{1}{4}, -1, 0$

- Fill in the numbers in the correct order.
 - Explain how the position of the numbers on the number line supports the inequality statements you created.
- c. Create a new pair of greater than and less than inequality statements using three other rational numbers.

Problem Set

For each of the relationships described below, write an inequality that relates the rational numbers.

1. Seven feet below sea level is farther below sea level than $4\frac{1}{2}$ feet below sea level.
2. Sixteen degrees Celsius is warmer than zero degrees Celsius.
3. Three and one-half yards of fabric is less than five and one-half yards of fabric.

Fill in the blanks with numbers that correctly complete each of the statements.

4. Three integers between -4 and 0 $<$ $<$

5. Three rational numbers between 16 and 15 $<$ $<$