

## 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.
4. A loss of \$500 in the stock market is worse than a gain of \$200 in the stock market.
5. A test score of 64 is worse than a test score of 65, and a test score of 65 is worse than a test score of  $67\frac{1}{2}$ .
6. In December, the total snowfall was 13.2 inches, which is more than the total snowfall in October and November, which was 3.7 inches and 6.15 inches, respectively.

For each of the following, use the information given by the inequality to describe the relative position of the numbers on a horizontal number line.

7.  $-0.2 < -0.1$
8.  $8\frac{1}{4} > -8\frac{1}{4}$
9.  $-2 < 0 < 5$
10.  $-99 > -100$
11.  $-7.6 < -7\frac{1}{2} < -7$

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

12. Three integers between  $-4$  and  $0$             $<$        $<$
13. Three rational numbers between  $16$  and  $15$             $<$        $<$
14. Three rational numbers between  $-1$  and  $-2$             $<$        $<$
15. Three integers between  $2$  and  $-2$             $<$        $<$