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 ____ $<$ ____ $<$ ____

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