

Name: _____

Thursday, February 19, 2015 'A' Week

Lesson Summary

When both sides of an inequality are added or subtracted by a number, the inequality symbol stays the same, and the inequality symbol is said to be _____.

When both sides of an inequality are multiplied or divided by a positive number, the inequality symbol stays the same, and the inequality symbol is said to be _____.

When both sides of an inequality are multiplied or divided by a negative number, the inequality symbol switches from $<$ to $>$ or from $>$ to $<$. The inequality symbol is _____.

Problem Set

- For each problem, use the properties of inequalities to write a true inequality statement. The two integers are -2 and -5 .
 - Write a true inequality statement.
 - Subtract -2 from each side of the inequality. Write a true inequality statement.
 - Multiply each number by -3 . Write a true inequality statement.
- On a recent vacation to the Caribbean, Kay and Tony wanted to explore the ocean elements. One day they went in a submarine 150 feet below sea level. The second day they went scuba diving 75 feet below sea level.
 - Write an inequality comparing the submarine's elevation and the scuba diving elevation.
 - If they only were able to go one-fifth of the capable elevations, write a new inequality to show the elevations they actually achieved.
 - Was the inequality symbol preserved or reversed? Explain.
- If a is a negative integer, then which of the number sentences below is true? **If the number sentence is not true, give a reason.** You may use If / Then statements to support your reason.
 - $5 + a < 5$ TRUE
 - $5 + a > 5$ NOT TRUE Reason: If ' a ' is a negative number, then $(5+a)$ will be LESS THAN 5. $5 + a < 5$. Sign is reversed.
 - $5 - a > 5$
 - $5 - a < 5$
 - $5a < 5$
 - $5a > 5$
 - $5 + a > a$
 - $5 + a < a$
 - $5 - a > a$
 - $5 - a < a$
 - $5a > a$
 - $5a < a$