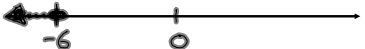# Algebra I

6-1
Solving Linear Inequalities

<u>inequality</u> - algebraic expressions that are not equal.

List and name all the inequality symbols:
1) $\neq$ → not equal
2) $<$ → less than
3) $>$ → greater than
4) $\leq$ → less than or equal to; Most
5) $\geq$ → greater than or equal to; Least
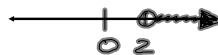

Graph the following:

1) $x < 5$

2) $x \geq -2$

3) $x > 0$

4) $x \leq -6$

Solve each inequality, and graph its solution.

5) $x - 7 > -5$
$x - 7 + 7 > -5 + 7$
$x > 2$

6) $6 > y - 3.3$
$6 + 3.3 > y - 3.3 + 3.3$
$9.3 > y$

7) $x + 7 \geq 4$
$x + 7 - 7 \geq 4 - 7$
$x \geq -3$

8) $x + 3\frac{1}{4} < 5$
$x + \frac{13}{4} - \frac{13}{4} < 5 - \frac{13}{4}$ $\frac{20}{4} - \frac{13}{4}$
$x < \frac{7}{4}$

Tell whether each statement is true for all real numbers. If you think it is not, give a numerical example to support your answer.

9) If $a < b$, then $a - c < b - c$

$a - c + c < b - c + c$
$a < b$
True

Assignment:
pg 359
  1-9 all,
  14-28 all,
  31-34, 36, 38