Algebra 1

Chapter 3
Section 2

Equivalent Inequalities

$3x + 7 = 13$ $\qquad$ $7y - 3 > 4$

$3x = 6$ $\qquad$ $7y > 7$

Remember: Equivalent equalities have the same solutions
Equivalent inequalities also have the same solutions

Solving Inequalities with Addition or Subtraction

$x + 9 > 5$

$h + 13 \leq 13$

$t - 3 \geq -1$

$4 + z < -9$

$11 < 1 + y$

$r - 14 \geq 6$

$x > -4$

$h \geq 0$

$t \geq 2$

$z < -13$

$y > 10$

$r \geq 20$

Writing an Inequality

Two baseball teams are tied 4-4 in extra innings. If the game can not end in a tie, write an inequality that states how many runs will be scored in this game.

$r > 4 + 4$

$r > 8$

Writing and Solving an Inequality

You have to sell at least 175 raffle ticket for your school fundraiser drawing. You have sold 96 tickets so far. Write an inequality identifying how many more tickets you will need to sell. Then solve.

$t + 96 \geq 175$

$t \geq 79$

Graphing a Solution

Solve the inequality and graph the solution:

$10 < 9 + x$

$1 < x$

$x > 1$