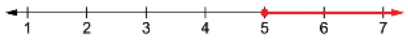
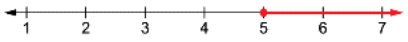
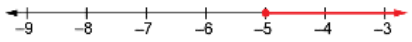
Patterns and Relations

Activity 10 Assessment

Solving Linear Inequalities and Graphing Solutions

Content: Solving Linear Inequalities and Graphing Solutions			
Solves inequalities of the form $n \geq 5$ and represents solutions on a number line "I know that this means that *n* is greater than or equal to 5, so any value that is 5 or greater is a solution." 	Solves one-step inequalities and represents solutions on a number line "To solve $n + 5 \geq 10$, I can subtract 5 from both sides to get $n \geq 5$." 	Solves and graphs multi-step inequalities with rational numbers, including inequalities that require multiplying or dividing by –1, and verifies solutions "To solve $-2n + 5 \leq 15$, I can subtract 5 from both sides to get $-2n \leq 10$. Then I can divide both sides by –2, which means I need to reverse the inequality. $n \geq -5$" 	Writes and solves multi-step inequalities to represent real-world problems and interprets solution within the context "If the price of two burgers is more than \$15.50, I can represent it with the inequality $2c > 15.50$, which has a solution of $c > 7.75$. This means that each burger costs at least \$7.75."
Observations/Documentation			

Patterns and Relations

Activity 10 Assessment

Solving Linear Inequalities and Graphing Solutions

Competency: Communicating & Representing			
Describes the solution of an inequality orally	Represents the solution of an inequality using symbols and words	Represents solution of an inequality using words, symbols, and graphs	Represents the solution of an inequality in a variety of ways and includes justification and/or proof
"The solution can be any number under 8, but it can't be 8."	"$x + 4 < 12$ I know that when $x = 8$, $x + 4 = 12$. So, x can be any number less than 8. I would write the solution as $x < 8$."	"The solution is $x < 8$, which is any number less than 8. I can graph the solution on a number line, with an open circle at 8 and an arrow to the left."	$-3x \leq 12$ "To keep the inequality true, when I divided both sides by –3, I reversed the inequality sign. I checked the solution by choosing a number in the solution set and substituting it into the original inequality. The inequality was still true, so I knew my solution was correct."
Observations/Documentation			