Chapter 9 Review

For #1 to #6, write the term from the box that completes each statement.

	algebra	boundary point	closed circle		
	inequality	open circle	solution		
1.	A mathematical statement that compares expressions that may not be equal is called a(n)				
2.	You can show inequalities	on a number line or with	using symbols.		
3.	On a number line, a(n) boundary point is not a pos	sible solution.	shows that the		
4.	For the inequality $x > 5$, the	value of 7 is a possible			
5. On a number line, the value that separates solutions from non-solutions is called the					
6. 9.1	On a number line, a(n) boundary point is a possible Representing Inequalities	e solution. s, pages 504–514	shows that the		
7.	A business is advertising a sale. Write each statement as an inequality.				
	a) Savings of up to 40%	b) Over 80 majo	r items on sale		
	Savings $_\{(\leq \text{ or } \geq)} 40\%$				
8.	Use words and algebra to sl	how each inequality.			
	a) $++++++++++++++++++++++++++++++++++++$	$\begin{array}{c} \bullet \bullet$			
	Words: A number(gr	<i>eater</i> or <i>less</i>) <i>Words</i> :			
	than				
	Algebra: $x _ (< \text{ or } >)$	Algebra:			

Name:

Date: _____

- **9.** Complete the number line to show each inequality. State one value that is a solution. State one value that is not a solution.
 - **a)** r > -4



b) $s \le 7$

9.2 Solving Single-Step Inequalities, pages 516–527

- **10.** Verify that the solution shown on the number line is correct. If the number line is incorrect, write the correct solution.
 - **a)** $-5x \ge -40$



Name:	Date:	
11. Solve each inequality. a) $d-7 > -10$	b) $\frac{c}{-5} > 3.2$ When you multiply or divide by a negative, change the inequality sign.	

- 12. Tim earns \$15/h working during the summer. His goal is to earn at least \$600 each week. How many hours will Tim need to work each week to achieve his goal?
 - a) Write an inequality to model the problem.

Variable: Let _____ = ____

Inequality: _____

b) Solve the inequality and write a sentence to explain the solution.

Sentence:

9.3 Solving Multi-Step Inequalities, pages 529-543

13. Verify whether $x \ge 5$ is the correct solution for $5x + 4 \le 6x - 1$.



(correct or incorrect)

14. Solve each inequality. Then, verify the solution.

	a) $\frac{x}{3} - 5 < 10$		Check:
	b) $5x + 8 < 4x - 12$	Subtract 8. Subtract 4 <i>x</i> .	Check:
	c) $-2(3x+4) \ge -8$		Check:
15.	A committee is planning a banquet. The dinner costs \$450 plus \$24 per p The committee needs to keep the tota How many people can attend the ban a) Write an inequality to model the	erson. Il cost under \$200 quet?	00. cost of dinner < \$2000

b) Solve the inequality. Write a sentence to explain the situation.