Math 1 Fall Final Review Study Guide Ch 1-2 Name_____

Per_____

Chapter 1: Solving Linear Equations

Solving Multi-Step Linear Equations

Textbook: Ch 1 section 3 p21

What are the steps for solving linear equations?

Notes/ Steps:

Solve:

$3(x + 1) + 6 = -2x - 1$

How can you tell if a linear equation has **no solutions**? **Infinitely many solutions**?

Notes:

Solve: $2(x + 4) = 2x - 1$

Solve: $4n - 6 = 2(2n - 3)$

Absolute Value Equations

Textbook: Ch 1 section 4 p28

What does absolute value mean? How do you solve an absolute value equation?

Notes

Absolute Value:

Solve: $|n| = 7$

Graph:

Solve: $2|x - 3| = 4$

Graph:

Literal Equations

Textbook: Ch 1 section 5 p36

What is a literal equation? How do you solve a literal equation for one variable?

Notes/ steps:

Solve the literal equation for y:

$3y + 2x = 12$

Chapter 2: Solving Linear Inequalities

Writing and Graphing Linear Inequalities *Textbook: Ch 2 section 1 p57*

Represent each linear inequality with words, algebra, and a graph.

Words	**Algebra**	**Graph**
x is less than 7		
x is greater than -3		
x is less than or equal to 8		
x is greater than or equal to 1		

Solving Inequalities *Textbook: Ch 2 section 3 p68*

Write the rule for multiplying or dividing an inequality by a negative number.

Solve: $-2x + 3 > 9$ **Graph:**

Solve: $-7x < 28$ **Graph:**

Rule:

Graphing Compound Inequalities *Textbook: Ch 2 section 5 p82*

Write the definition of a compound inequality.

Compound Inequality:

Graph: $x \geq 3 \ and \ x < 7$

Graph: $x < 3 \ or \ x \geq 7$

Solving Compound Inequalities

Textbook: Ch 2 section 5 p83

Solve a compound inequality with *and* or *or.*

Notes:

Solve: $2 \leq 2x - 3 < 7$

Solve: $3y + 2 < 8 \quad or \quad 2y + 1 > 7$

Solving Absolute Value Inequalities

Textbook: Ch 2 section 6 p88

What does it mean to have absolute value greater than or less than a number?

Notes:

Solve and Graph: $|x| < 3$

Solve and Graph: $|x| \geq 2$

Solve and Graph: $|x - 7| < 2$

Solve and Graph: $|x - 7| \geq 2$