

## Lesson 1.7 ~ Solutions to Linear Equations

Name \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

**Solve each equation. Describe the number of solutions (one, none or infinitely many).**

1.  $2(x - 6) = 4x - 24$

2.  $3x - 1 = 3x + 7$

3.  $2x = 11x - 36$

4.  $6x - 3 + 2x = 8x + 7 - 10$

5.  $7(x - 2) + 1 = -34$

6.  $\frac{1}{2}(x + 4) = \frac{1}{2}x + 1$

7.  $\frac{x}{8} - 5 = 7$

8.  $5(x - 3) + 1 = 5x - 14$

9.  $10x + 4 - 8x = 2(x - 1)$

10. Matt and Kara solved the equation  $8(x - 5) = 8x + 40$ . Kara said the answer was  $x = 0$  and Matt said there are no solutions. Who is correct? Support your answer with work.

11. Isaac wrote two simplified expressions that were not equal to each other. Each equation also had a different coefficient on the variable. If he sets the expressions equal to each other, will the equation have one solution, no solution or infinitely many solutions? Use an example to support your answer.