NAME DATE PERIOD

Unit 4

Lesson 8: Practice Problems

1. Lin was looking at the equation $2x - 32 + 4(3x - 2462) = 14x$. She said, "I can tell right away there are no solutions, because on the left side, you will have $2x + 12x$ and a bunch of constants, but you have just $14x$ on the right side." Do you agree with Lin? Explain your reasoning.

2. Han was looking at the equation $6x - 4 + 2(5x + 2) = 16x$. He said, "I can tell right away there are no solutions, because on the left side, you will have $6x + 10x$ and a bunch of constants, but you have just $16x$ on the right side." Do you agree with Han? Explain your reasoning.

3. Decide whether each equation is true for all, one, or no values of x.

   a. $6x - 4 = -4 + 6x$

   b. $4x - 6 = 4x + 3$

   c. $-2x + 4 = -3x + 4$

4. Solve each of these equations. Explain or show your reasoning.

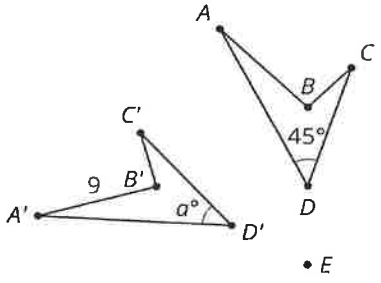
   a. $3(x - 5) = 6$

   b. $2\left(x - \frac{2}{3}\right) = 0$

   c. $4x - 5 = 2 - x$

5. The points $(-2,0)$ and $(0,-6)$ are each on the graph of a linear equation. Is $(2,6)$ also on the graph of this linear equation? Explain your reasoning.

6. In the picture triangle $A'B'C'$ is an image of triangle ABC after a rotation. The center of rotation is E.



   a. What is the length of side AB? Explain how you know.

   b. What is the measure of angle D'? Explain how you know.