

## Lesson 16 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.

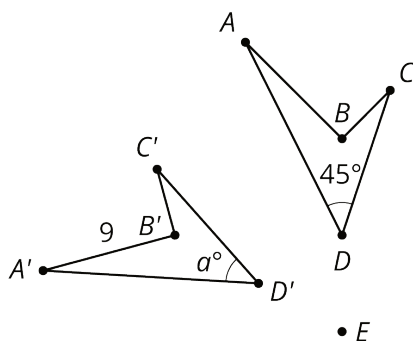
a.  $3(x - 5) = 6$

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

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

(From Unit 4, Lesson 13.)

5. 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.

(From Unit 1, Lesson 6.)

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

$2(x + 5) = 3x + 1$

$3y - 4 = 6 - 2y$

$3(n + 2) = 9(6 - n)$

(From Unit 4, Lesson 13.)