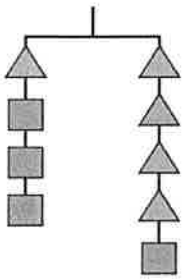
NAME DATE PERIOD

Unit 4

Lesson 3: Practice Problems

1. In this hanger, the weight of the triangle is x and the weight of the square is y.



   a. Write an equation using x and y to represent the hanger.

   b. If x is 6, what is y?

2. Match each set of equations with the move that turned the first equation into the second.

   A. $6x + 9 = 4x - 3$
      $2x + 9 = -3$

   B. $-4(5x - 7) = -18$
      $5x - 7 = 4.5$

   C. $8 - 10x = 7 + 5x$
      $4 - 10x = 3 + 5x$

   D. $\frac{-5x}{4} = 4$
      $5x = -16$

   E. $12x + 4 = 20x + 24$
      $3x + 1 = 5x + 6$

   1. Multiply both sides by $\frac{-1}{4}$

   2. Multiply both sides by -4

   3. Multiply both sides by $\frac{1}{4}$

   4. Add $-4x$ to both sides

   5. Add -4 to both sides

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3. Andre and Diego were each trying to solve $2x + 6 = 3x - 8$. Describe the first step they each make to the equation.

   a. The result of Andre's first step was $-x + 6 = -8$.

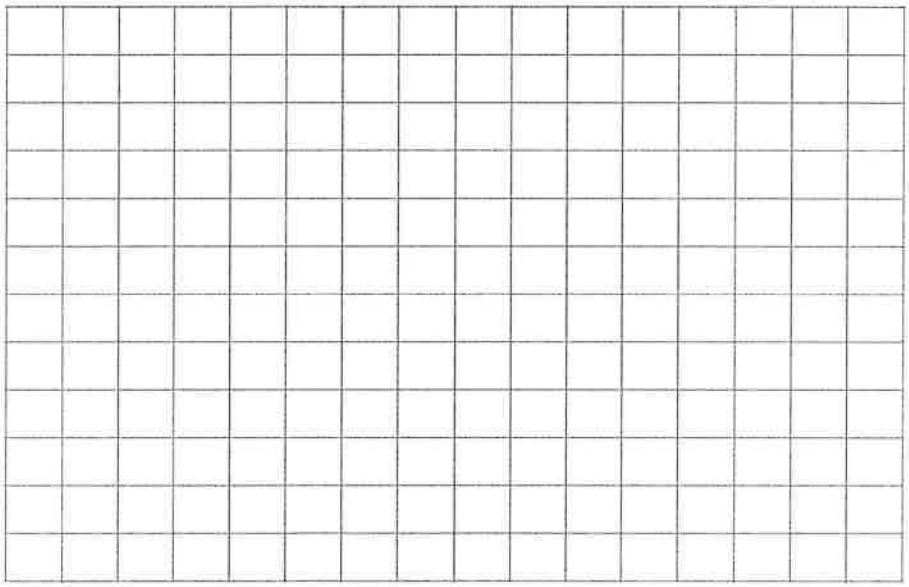
   b. The result of Diego's first step was $6 = x - 8$.

4.

   a. Complete the table with values for x or y that make this equation true: $3x + y = 15$.

   x

   b. Create a graph, plot these points, and find the slope of the line that goes through them.



5. Select **all** the situations for which only zero or positive solutions make sense.

   A. Measuring temperature in degrees Celsius at an Arctic outpost each day in January.

   B. The height of a candle as it burns over an hour.

   C. The elevation above sea level of a hiker descending into a canyon.

   D. The number of students remaining in school after 6:00 p.m.

   E. A bank account balance over a year.

   F. The temperature in degrees Fahrenheit of an oven used on a hot summer day.