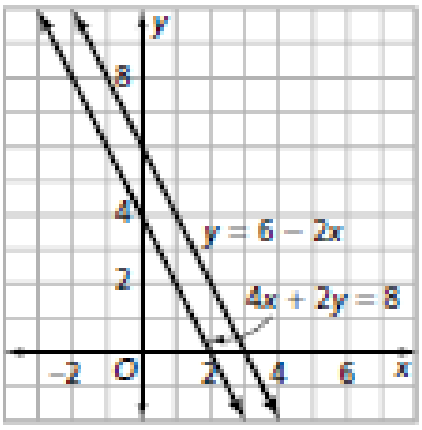
Lessons 4.10 and 4.11 Additional Practice

1. a. Messenger Service B: \$1 less
   b. Messenger Service A: \$6.50 less
   c. 12 miles

2. a. no solution
   b.



   The graph shows that the lines are parallel. Since parallel lines do not intersect, the system of equations does not have a solution.

3. a. (22, 510)
   b. No solution: the lines have the same slope and different y-intercepts, so the lines are parallel.

4. a. Parallel: the lines have the same slope of 0.4 and different y-intercepts.
   b. Intersecting; the lines have different slopes.
   c. Identical: the lines have the same slope of $-\frac{3}{2}$ and the same y-intercept of $\frac{5}{2}$.
   d. Parallel: the lines have the same slope of $\frac{2}{3}$ and different y-intercepts.

5. a. $y + 3 = -\frac{5}{6}(x - 12)$
   b. $y + 5 = \frac{2}{3}(x + 6)$
   c. $y + 4 = -\frac{2}{3}(x - 1)$
   d. $x = -2$
   e. $y = -11$

6. a. $k = -8$ b. $k = -8$
   c. $k = -8$ d. $k = -8$
   e. $k = -8$
   f. Answers may vary. Sample: If the graph of $y = mx + k$ contains $(0, b)$, then $k = q$.

7. a. $k = 40$ b. $k = 48$
   c. $k = 56$ d. $k = 800$
   e. $k = 8q$
   f. Answers may vary. Sample: If the graph of $y = mx + k$ contains $(a, 0)$, then $k = -ma$.

Lesson 4.12 Additional Practice

1. a. $(5, -2)$ b. $(-3, -4)$
   c. $(5, 13)$ d. $\left(\frac{2}{3}, \frac{4}{3}\right)$
   e. $\left(2, \frac{2}{5}\right)$ f. $(12, -8)$

2. a. \$2.50 b. \$1.50

3. a. $P(-2, 6)$ b. $x = -2$
   c. $y = 6$ d. $-4x + 7y = 50$

4. $y - 8 = -3(x + 5)$, $y - 8 = \frac{3}{4}(x + 5)$

5. Answers may vary. Sample: $y = \frac{2}{5}x + 2$

6. a. \$2.25 b. \$.75
   c. \$3.00 d. \$1.50
   e. Answers may vary. Samples: 1 coffee and 10 bagels, 2 coffees and 8 bagels, 3 coffees and 6 bagels, 4 coffees and 4 bagels

7. a. $(4, 9)$ b. $(-6, 38)$
   c. $(-3, -2)$ d. $(2, -6)$
   e. $(1, 5)$ f. $(6, -3)$

8. a. $(-2, 6)$ b. $\left(\frac{1}{2}, \frac{2}{3}\right)$
   c. no solution