Lesson 8.1: Systems of Linear Equations and Graphs

Practice – II

1. Describe a strategy that can be used to determine the number of solutions to a system of linear equations.

   Strategies will vary. One strategy is to use the slope and y-intercept to determine if the lines are parallel, coincident, or neither.

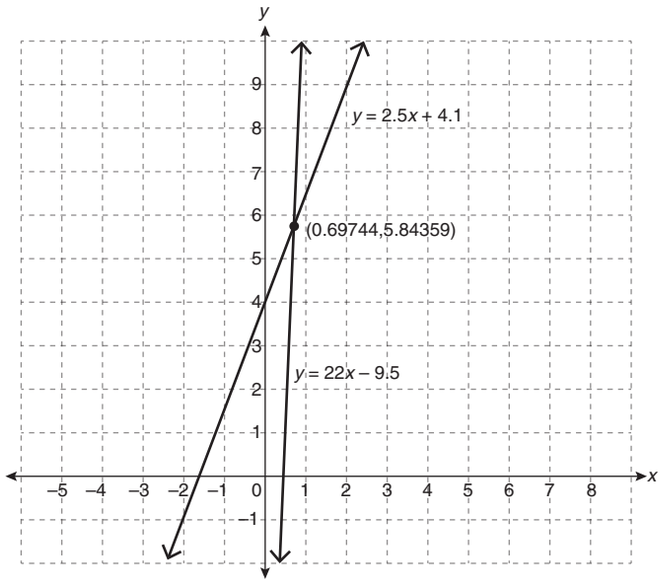
Relationship	Parallel	Coincident	Neither Parallel Nor Coincident
Slope	same	same	different
y-Intercept	different	same	any
Number of Solutions	0	infinite	1

2. Austin has found that both (13,17) and (24,61) are solutions to a system of linear equations. How are the two lines related? Explain.

   The system has more than one solution, so the lines must be coincident.

3. Use technology to determine an approximate solution to each of the following systems of linear equations.

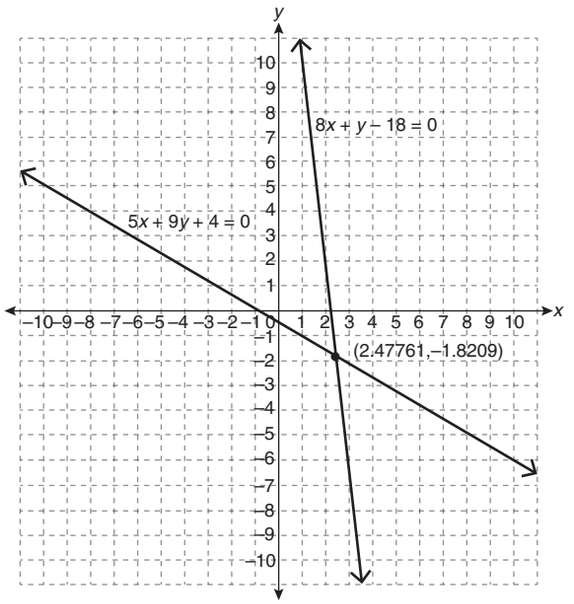
   a. $y = 22x - 9.5$ and $y = 2.5x + 4.1$.



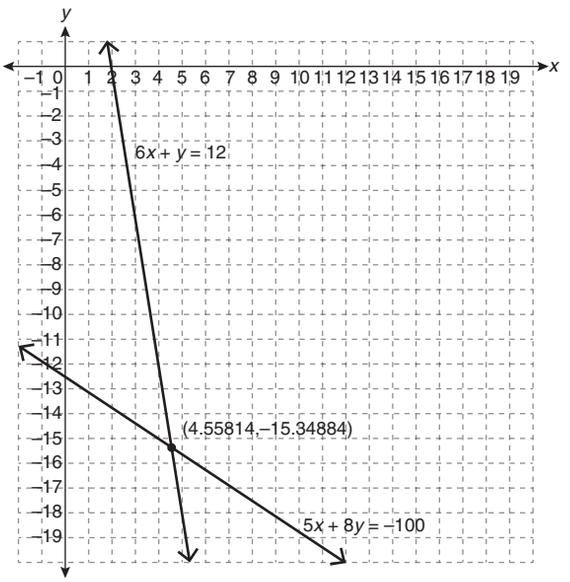
   The solution is approximately (0.70,5.84).

b. $8x + y - 18 = 0$ and $5x + 9y + 4 = 0$

The solution is approximately (2.48,–1.82).



c. $6x + y = 12$ and $5x + 8y = -100$



The solution is approximately (4.56,–15.35).

Please complete *Lesson 8.1 Explore Your Understanding Assignment* located in *Workbook 8.1* before proceeding to *Lesson 8.2.*