Name _____ Class _____ Date _____

Practice 3-1

Graphing Systems of Equations

Classify each system without graphing.

1. $\begin{cases} x + y = 3 \\ y = 2x - 3 \end{cases}$

2. $\begin{cases} 2x + y = 3 \\ y = -2x - 1 \end{cases}$

3. $\begin{cases} x + 3y = 9 \\ -2x - 6y = -18 \end{cases}$

4. $\begin{cases} x + y = 4 \\ y = 2x + 1 \end{cases}$

5. $\begin{cases} x + 3y = 9 \\ 9y + 3x = 27 \end{cases}$

6. $\begin{cases} x + 2y = 5 \\ 2x + 3y = 9 \end{cases}$

7. $\begin{cases} 3x + 2y = 7 \\ 3x - 15 = -6y \end{cases}$

8. $\begin{cases} x + y = 6 \\ 3x + 3y = 3 \end{cases}$

9. $\begin{cases} x + y = 11 \\ y = x - 5 \end{cases}$

10. $\begin{cases} x + 2y = 13 \\ 2y = 7 - x \end{cases}$

11. $\begin{cases} y = 12 - 5x \\ x - 4y = -6 \end{cases}$

12. $\begin{cases} 25x - 10y = 0 \\ 2y = 5x \end{cases}$

13. The spreadsheet below shows the monthly income and expenses for a new business.

a. Find a linear model for monthly income and a linear model for monthly expenses.

b. Use the models to estimate the month in which income will equal expenses.

	A	B	C
	Month	**Income**	**Expenses**
1	May	$1500	$21,400
2	June	$3500	$18,800
3	July	$5500	$16,200
4	August	$7500	$13,600

Solve each system by graphing. Check your answers.

14. $\begin{cases} y = x - 2 \\ x + y = 10 \end{cases}$

15. $\begin{cases} y = 7 - x \\ x + 3y = 11 \end{cases}$

16. $\begin{cases} x - 2y = 10 \\ y = x - 11 \end{cases}$

17. $\begin{cases} 5x + y = 11 \\ x - y = 1 \end{cases}$

18. $\begin{cases} x + y = -1 \\ x - y = 3 \end{cases}$

19. $\begin{cases} x - y = -1 \\ 2x + 2y = 10 \end{cases}$

20. $\begin{cases} 4x + 3y = -16 \\ -x + y = 4 \end{cases}$

21. $\begin{cases} y = -3x \\ x + y = 2 \end{cases}$

22. $\begin{cases} y = \frac{2}{3}x - 5 \\ y = -\frac{2}{3}x - 3 \end{cases}$

23. $\begin{cases} y = \frac{1}{2}x + 3 \\ y = -\frac{1}{4}x - 3 \end{cases}$

24. $\begin{cases} 2x - 4y = -4 \\ 3x - y = 4 \end{cases}$

25. $\begin{cases} x + y = 6 \\ x - y = 4 \end{cases}$