

Quiz Review on 3-1 and 3-2 **Graphing Systems of Equations**

Graph each system by hand then tell how many solutions each has and why.

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.
$$\begin{cases} x + 3y = 9 \\ 9y - 6x = 27 \end{cases}$$

5. The spreadsheet below shows the monthly income and expenses for a new business.
- Find a linear model for monthly income and a linear model for monthly expenses.
 - Use the models to estimate the month in which income will equal expenses.

	A	B	C
	Month	Income	Expenses
5	May	\$1500	\$21,400
6	June	\$3500	\$18,800
7	July	\$5500	\$16,200
8	August	\$7500	\$13,600

Solve each system by graphing. Check your answers.

6.
$$\begin{cases} y = x - 2 \\ x + y = 10 \end{cases}$$

7.
$$\begin{cases} x - 2y = 10 \\ y = x - 11 \end{cases}$$

8.
$$\begin{cases} 4x + 3y = -16 \\ -x + y = 4 \end{cases}$$

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

Solve each system by elimination.

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

11.
$$\begin{cases} -x + 3y = -1 \\ x - 2y = 2 \end{cases}$$

12.
$$\begin{cases} x + 2y = 10 \\ 3x - y = 9 \end{cases}$$

Solve each system by substitution. Check your answers.

13.
$$\begin{cases} y = x + 1 \\ 2x + y = 7 \end{cases}$$

14.
$$\begin{cases} y = 2x + 3 \\ 5x - y = -3 \end{cases}$$