Review of Systems of Equations Quiz Review

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

	А	В	С
:th	Month	Income	Expenses
5	May	\$1500	\$21,400
6 June		\$3500	\$18,800
7	July	\$5500	\$16,200
8	August	\$7500	\$13,600

Using linear regression find a linear equation to model both the income and expenses of the new business. Using these models find the month at which the income and expenses will be equal.

- a. Equation 1 (Income):
- b. Equation 2 (Expenses):

c. Solution:

d. Explanation:

- i. During which month will the income and expenses be equal?
- ii. At what dollar amount will be the value of the income and expenses when they are equal?

3) y = x - 11

Solve each of the following systems by graphing. CHECK YOUR SOLUTIONS.

2)
$$y = x - 2$$

$$y = -x + 10$$





4)
$$y = x + 4$$

 $y = -\frac{3}{4}x + 4$



5) y = -3xy = -x + 2



Solve each system by elimination. CHECK YOUR SOLUTIONS.

6) $x + y = 10$	7) $-x + 3y = -1$
-x - y = 2	x - 2y = 2

8)	x + 2y = 10	9) $3x + 5y = 10$
	3x - y = 9	5x + 7y = 10

Solve the following using substitution. CHECK YOUR SOLUTIONS.

10)
$$y = x + 1$$
11) $y = 2x + 3$ $2x + y = 7$ $5x - y = -3$

12)
$$3x + 5y = 2$$
 13) $x = -6y + 15$
 $x = -4y - 4$
 $-x + 4y = 5$

Solve the following using any method that you wish... Determine if there is one solution, infinitely many solutions or no solution. Explain your reasoning...

14) $x + y = 3$	15) $2x + y = 3$	16) $x + 3y = 9$
y = 2x - 3	y = -2x - 1	-2x - 6y = -18