

Secondary Math III
Elimination
Assignment 12.3

Name _____
Period _____

Solve the system using the method of elimination.

1.
$$\begin{cases} 4x + 2y = 8 \\ -8x - y = -10 \end{cases}$$

2.
$$\begin{cases} 2x + 3y = -11 \\ -5x + 6y = 14 \end{cases}$$

3.
$$\begin{cases} -4x + 3y = 12 \\ 3x - 2y = -8 \end{cases}$$

4.
$$\begin{cases} 3x + 2y = -9 \\ -5x - 3y = 13 \end{cases}$$

5.
$$\begin{cases} 2x - 3y = 5 \\ -6x + 9y = -10 \end{cases}$$

6.
$$\begin{cases} 15x - 10y = 15 \\ -6x + 4y = -6 \end{cases}$$

7.
$$\begin{cases} x + 4y = -8 \\ -4x + 2y = 14 \end{cases}$$

8.
$$\begin{cases} 4x + 6y = -8 \\ -6x - 9y = 10 \end{cases}$$

9.
$$\begin{cases} 2x + y = 1 \\ 12x + 6y = 6 \end{cases}$$

10.
$$\begin{cases} 2x + 2y = -4 \\ 4x - 6y = -18 \end{cases}$$

Solve the system using either the substitution or elimination method.

11.
$$\begin{cases} 4x - 4y = -12 \\ 8x - 5y = -15 \end{cases}$$

12.
$$\begin{cases} 8x + 3y = 13 \\ 6x + y = 11 \end{cases}$$

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

14.
$$\begin{cases} -4x + 3y = 18 \\ 2x + 2y = -2 \end{cases}$$

For the following problems, define the variables, write a system of linear equations and solve with elimination in order to answer the question.

15. Altogether, 292 tickets were sold for a school basketball game. An adult ticket costs \$3. A student ticket costs \$1. Tickets sales were \$470. How many of each type of ticket was sold?

16. Two buildings in an apartment complex, Building A and Building B, have a total of 120 apartments. Building A has more apartments. The difference in the number of apartments between the two buildings is 16 apartments. How many apartments does each building have?

17. If you add Natalie's age and Fred's age, the result is 38. If you add Fred's age to 3 times Natalie's age, the result is 66. How old are Fred and Natalie?