

Name _____

Date _____ Pd. _____

Notes: Elimination using Addition and Subtraction Day 2

Linear Combination	One method for solving a _____. In this method, the equations are combined by _____. them to _____ one of the represented variables. One or both of the equations may need to be _____ by a scalar before this will work.
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NOTES**Solving Systems of Linear Equations by Inspection**

An alternative method for solving a system of equations where the coefficients of one of the variables are equal is to solve by inspection.

An example to solve by inspection:

$$\begin{cases} 3x + 2y = 12 \\ 3x + 5y = 18 \end{cases}$$

To solve this by inspection, a student might reason that to make the first equation equivalent to the second, you would add $3y$ on the left and 6 on the right. So, $3y$ must be the same as 6 , and y must equal 2 . Complete the problem by substituting 2 for y and solving for x , and check the results in each equation.

When a system requires multiplication to create equal coefficients for one variable, a student may perform the multiplication and then choose to complete the problem by inspection.

Name _____

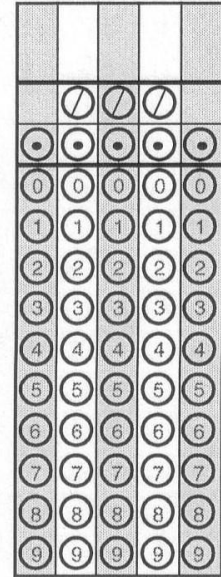
Date _____ Pd. _____

Exit Card: Elimination using Addition and Subtraction Day 2

Information about fees for two health clubs is shown in the table below.

HEALTH CLUB PLANS

	Initial Membership Fee	Monthly Fee
Arnold's Gym	\$200	\$25
Better Body Club	\$100	\$45



For what number of months is the total cost the same for both health clubs?

Russ worked a total of 135 hours during the month of July. He earned \$3,600. Russ earned \$25 per hour each weekday that he worked. He earned \$40 per hour each Saturday that he worked. Let x represent the number of weekday hours worked and y represent the number of Saturday hours worked. Which system of equations represents this situation?

- A $x + y = 135$
 $25x + 40y = 3,600$
- B $x + y = 135$
 $40x + 25y = 3,600$
- C $x + y = 3,600$
 $25x + 40y = 135$
- D $x + y = 3,600$
 $40x + 25y = 135$

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Homework: Page 385 (11 – 14, 22 – 24)11. If $2x + 7y = 17$ and $2x + 5y = 11$, what is the value of $2y$?

A -4

B -2

C 3

D 6

12.
$$\begin{cases} x + y = -3 \\ x - y = 1 \end{cases}$$

13.
$$\begin{cases} s - t = 4 \\ s + t = 2 \end{cases}$$

14.
$$\begin{cases} 3m - 2n = 13 \\ m + 2n = 7 \end{cases}$$

22.
$$\begin{cases} 4x - 3y = 12 \\ 4x + 3y = 24 \end{cases}$$

23.
$$\begin{cases} a - 2b = 5 \\ 3a - 2b = 9 \end{cases}$$

24.
$$\begin{cases} 4x + 5y = 7 \\ 8x + 5y = 9 \end{cases}$$