

Name: _____ Date: _____ Period: _____

Geometry Systems of Equations Skills Review

For problems #1-2 solve the systems of equations using substitution. Then check your answer.

1.
$$\begin{cases} x = 5 - y \\ y - 2x = 11 \end{cases}$$

2.
$$\begin{cases} 2x - y = 6 \\ 4x - 2y = 8 \end{cases}$$

For problems #3-4 solve the systems of equations using elimination. Then check your answer.

3.
$$\begin{cases} -x + 2y = 12 \\ x + 6y = 20 \end{cases}$$

4.
$$\begin{cases} 2x + 3y = 18 \\ 5x - y = 11 \end{cases}$$

For problems #5-8, use the best method. Then check your answer.

5.
$$\begin{cases} x - 3y = -1 \\ 2x - 4y = 2 \end{cases}$$

6.
$$\begin{cases} 2x + 5y = 3 \\ 4x = -10y + 6 \end{cases}$$

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7. $\begin{cases} y = -5 - 3x \\ x - 2y = 3 \end{cases}$	8. $\begin{cases} -2x + 3y = 14 \\ x + 2y = 7 \end{cases}$
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For problems #9-10 Define variables and write a system of equations for each situation and then solve them algebraically to answer the questions.

9. Joyce runs to the gym (burning 150 calories). She does a workout on the treadmill burning 10 cal/min. Josiah drives to the gym (burning 0 calories... except for maybe two when he busts a move to Justin Bieber tunes) and does a cross-fit workout burning 40 cal/min. How long will it take for Joyce and Josiah to burn the same number of calories? How many calories do they burn at this time?

10. Ms. Zimmerman enjoys Bon Appétit and Martha Stewart magazines. She has a collection of 30 magazines total. Bon Appétit costs \$3.29 per magazine and Martha Stewart costs \$4.50 per magazine. Ms. Zimmerman has spent \$113.22 total. How many of each magazine does she own?