Mth 096 – Beginning Algebra – **Practice Exam 4**

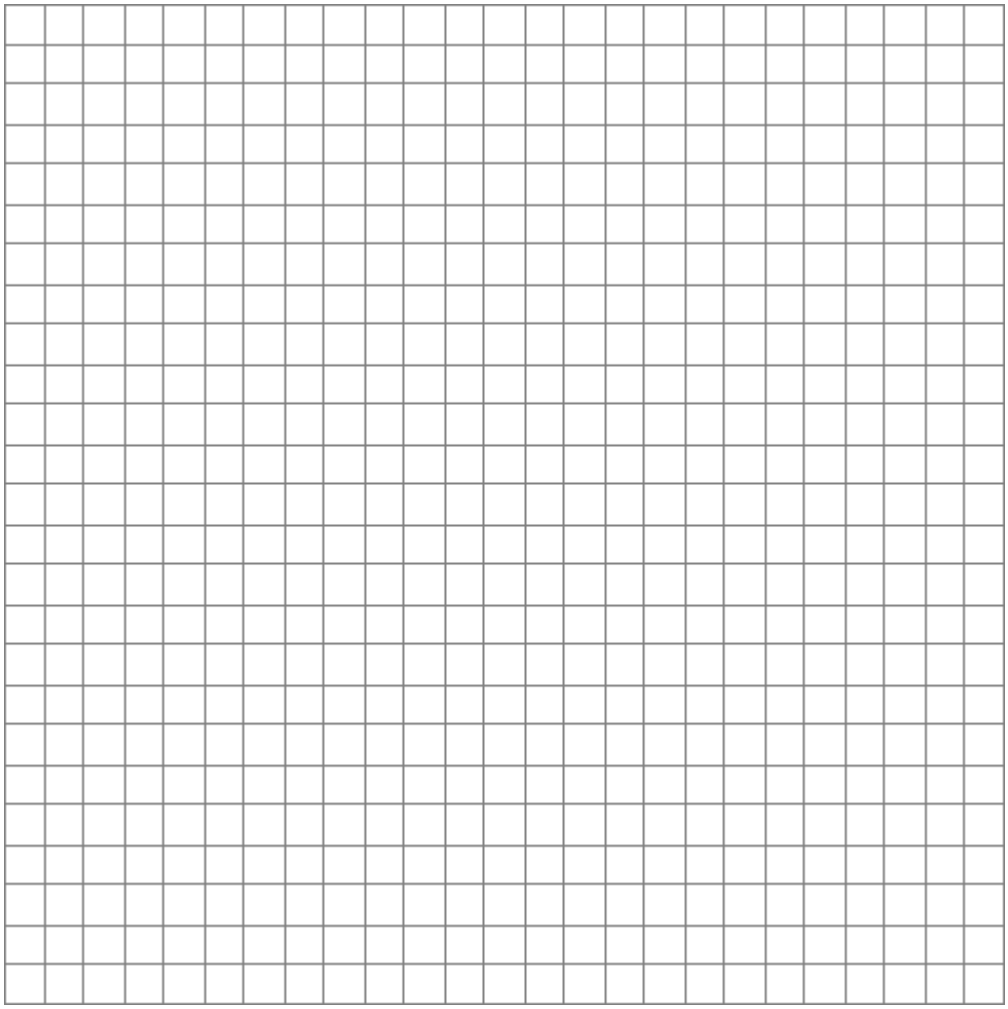
NOTE: This exam should not be taken as a complete list of possible problems. It is merely intended to be an example of the difficulty level of the regular exam. To best utilize it as a *practice* exam, try to complete the exam without notes or distractions. Try to emulate the classroom environment as much as possible.

1. Determine whether the ordered pair $(3,2)$ is a solution to the following system of equations. Justify your answer.

$$\begin{cases} 2x - y = 4 \\ x + 3y = 7 \end{cases}$$

2. Use the *graphical method* to solve the system of equations.

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



3. Use the *addition method* to solve the system of equations.

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

4. Use the *substitution method* to solve the system of equations.

$$\begin{cases} 3a + 5b = 1 \\ b - a = 5 \end{cases}$$

5. Use the method of your choice to solve the following system of equations.

$$\begin{cases} x - 3y = 1 \\ 2x + y = 9 \end{cases}$$

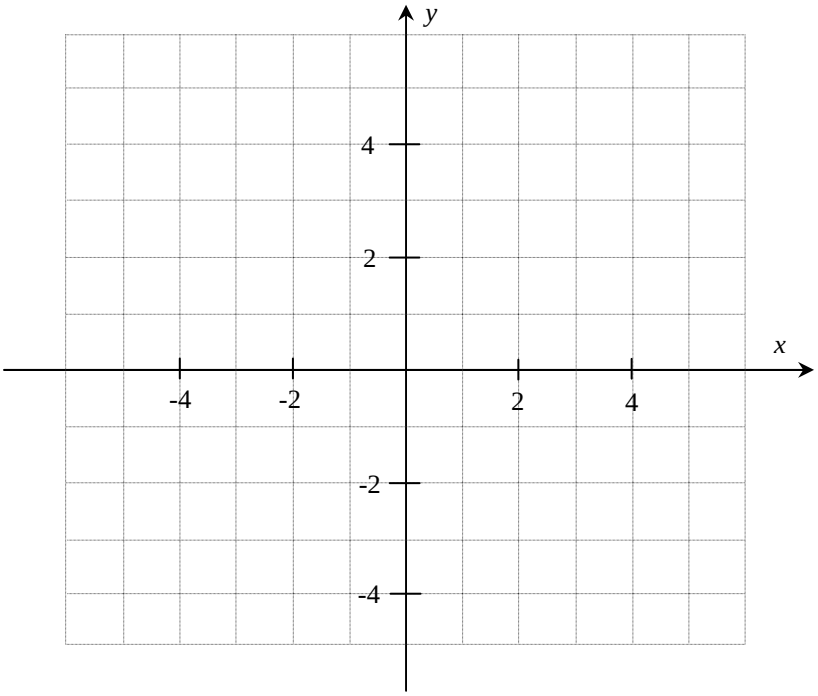
6. Use the method of your choice to solve the following system of equations.

$$\begin{cases} 2x + 2y = 6 \\ x + y = 3 \end{cases}$$

7. A computer store receives a shipment of 15 new laptops and desktops from IBM. Suppose each laptop weighs 8 lbs. and each desktop weighs 50 lbs. If the computers weigh a total of 540 lbs., how many laptops and how many desktops are in the shipment?

8. Suppose you have 24 coins consisting of nickels and dimes. If the total value of the coins is $1.95, set up a system of linear equations reflecting the situation. (You do NOT need to solve the system. Just write two equations.)

9. Graph the inequality $5x + 2y \leq 10$.



10. Graph the inequality $x - y > 4$.