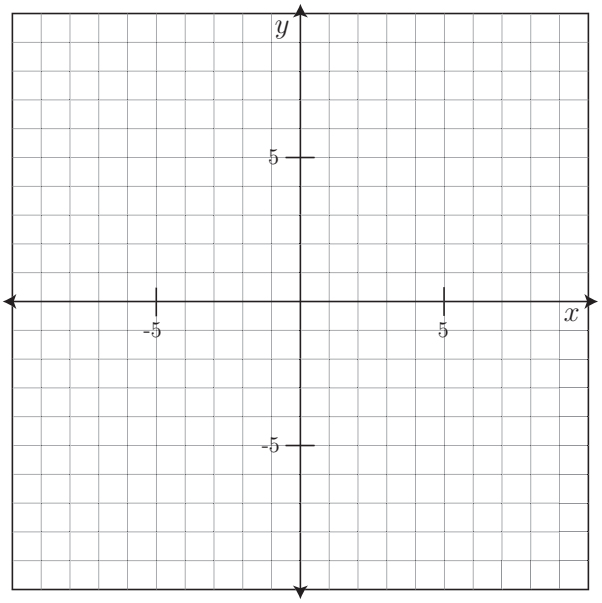
Linear Systems 1 Name:_____

YOU MAY USE A CALCULATOR TO VERIFY SOLUTIONS, BUT NOT TO PROVIDE THEM.

Show all relevant work!

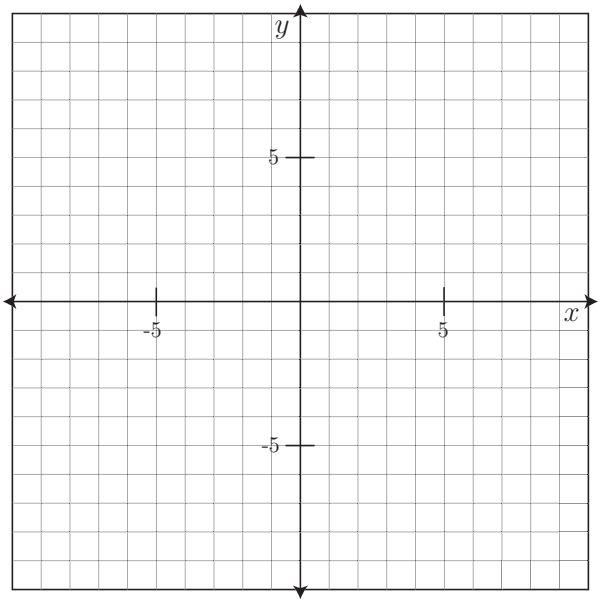
1. Solve this system by graphing.

$$\begin{aligned} 3x - 2y &= 8 \\ 4x + 3y &= 5 \end{aligned}$$



2. Solve this system by graphing.

$$\begin{aligned} x &= -3 \\ y &= 7 \end{aligned}$$



3. The tables for two linear equations are shown below. Determine the x values that the solution to the system occurs between.

x	-4	-2	0	2	4	6
y_1	11	6	1	-4	-9	-14

x	-4	-2	0	2	4	6
y_2	4	7	10	13	16	19

4. Solve by substitution.

(a)

$$\begin{aligned} 4x - 3y &= 11 \\ 5x + y &= -2 \end{aligned}$$

(b)

$$\begin{aligned} y &= \frac{2}{3}x + 5 \\ 4x - 6y &= 7 \end{aligned}$$

5. Write a system of equations (involving two variables in each equation) for which the solution is $(-2, 3)$.

6. Explain why the solution(s) of a system of two linear equations can be found by locating the intersection point(s) of the graphs of two equations.