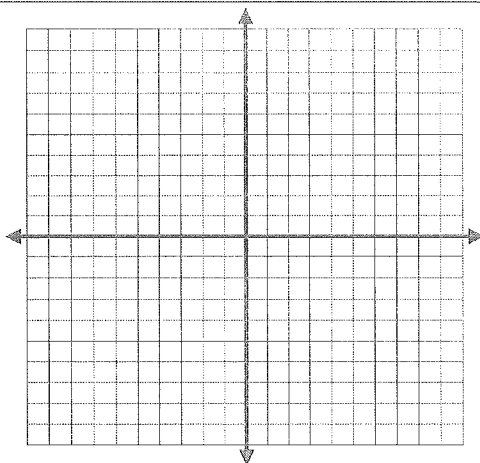


Solve the system of linear equations by graphing. Check your answer and state the type of system.

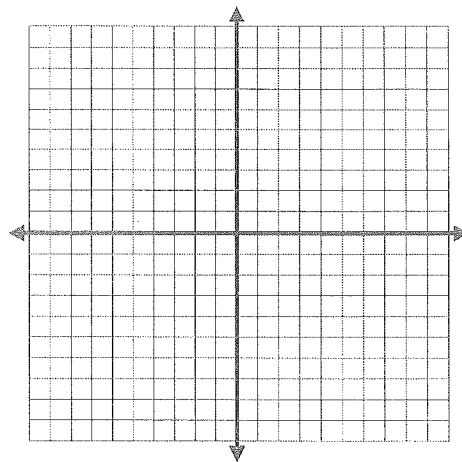
1) 
$$\begin{cases} y = 3x + 4 \\ y = -3x - 2 \end{cases}$$



Type:

Check:

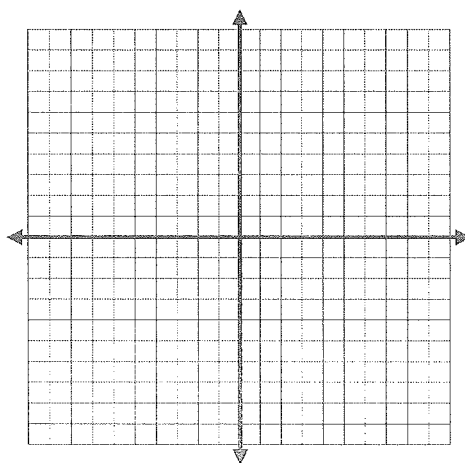
2) 
$$\begin{cases} y = \frac{4}{3}x + 3 \\ y = -\frac{2}{3}x - 3 \end{cases}$$



Type:

Check:

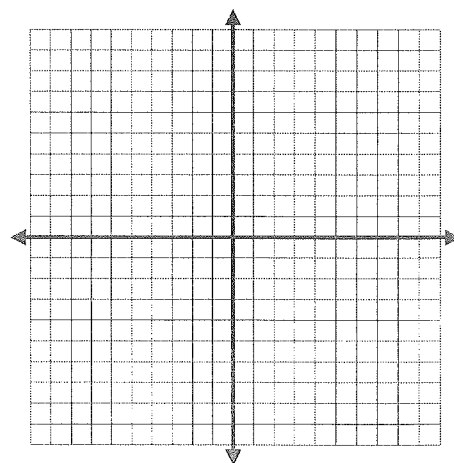
3) 
$$\begin{cases} y = \frac{5}{4}x - 2 \\ y = \frac{5}{4}x + 1 \end{cases}$$



Type:

Check:

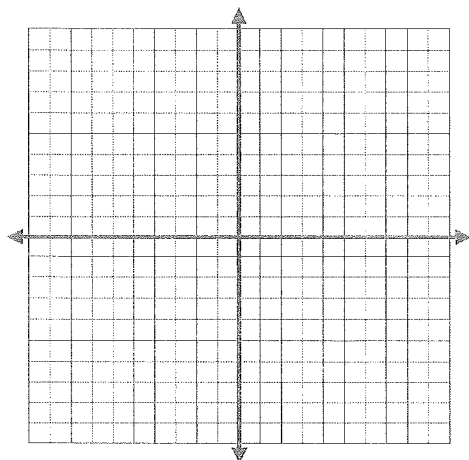
4) 
$$\begin{cases} y = \frac{1}{3}x + 2 \\ y = -x - 2 \end{cases}$$



Type:

Check:

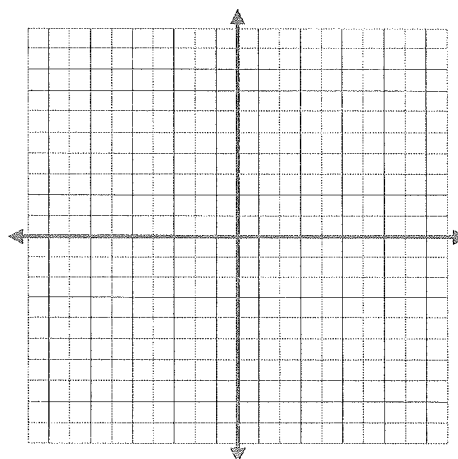
5) 
$$\begin{cases} y = -\frac{3}{2}x - 4 \\ y = \frac{1}{2}x + 4 \end{cases}$$



Type:

Check:

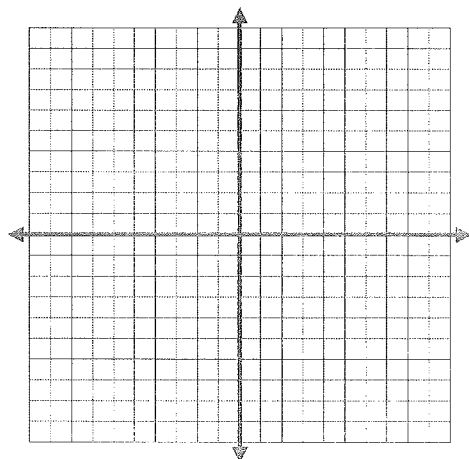
6) 
$$\begin{cases} 4y = 3x + 4 \\ -2y = x + 8 \end{cases}$$



Type:

Check:

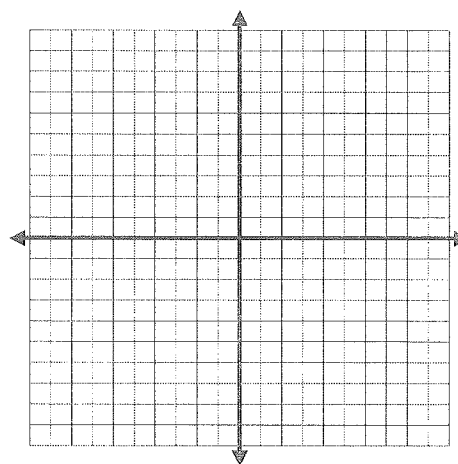
7) 
$$\begin{cases} 2y = 3x + 4 \\ 4y - 6x = 8 \end{cases}$$



Type:

Check:

8) 
$$\begin{cases} 2y = -3x - 6 \\ -x = 2y - 2 \end{cases}$$

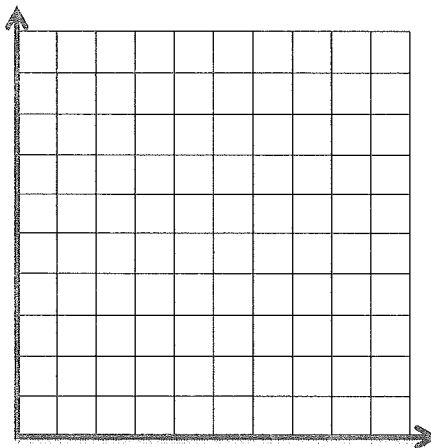


Type:

Check:

9) Sally ran 3 miles last week and will run 7 miles per week from now on. Anthony ran 9 miles last week and will run 4 miles per week from now on. Write and then solve by graphing the system of linear equations that can be used to represent this situation.

- a) Explain what  $x$  and  $y$  represent in the equations.
- b) Write the system of linear equations. After how many weeks will Sally and Anthony have run the same number of miles? How many miles? Solve by graphing.



10) Write *sometimes*, *always*, or *never* to complete the following statements.

- a) If the equations in a system of linear equations have different slopes, there is \_\_\_\_\_ one solution for the system.
- b) If the equations in a system of linear equations have the same slope, there are \_\_\_\_\_ infinitely many solutions for the system.
- c) If the equations in a system of linear equations have the same slope and a different  $y$ -intercept, there is \_\_\_\_\_ a solution for the system.