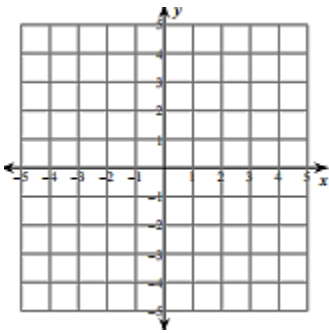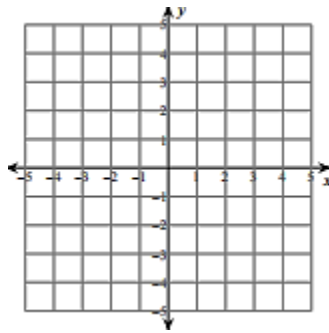Homework 2.6 Solving System of Equations *Graphically*

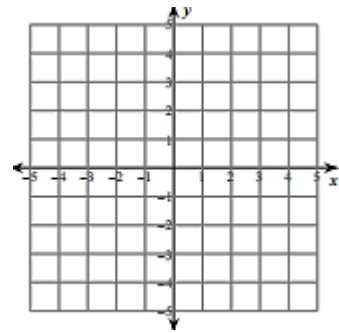*Solve each system by graphing.*

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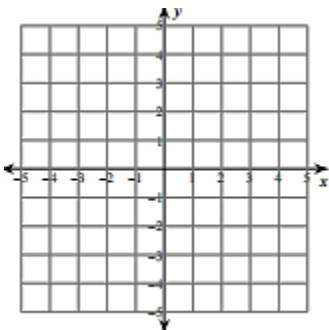$$\begin{cases} y = -\frac{5}{3}x + 3 \\ y = \frac{1}{3}x - 3 \end{cases}$$

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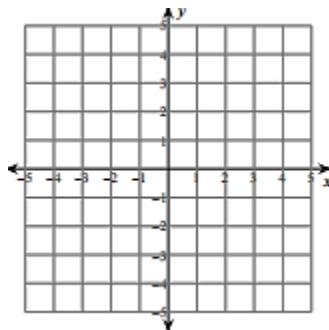$$\begin{cases} y = 4x + 3 \\ y = -x - 2 \end{cases}$$

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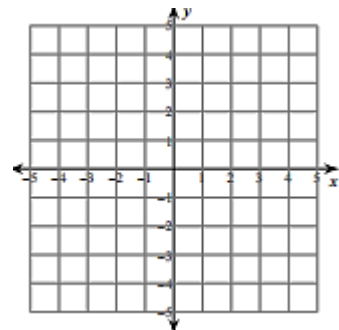

4.
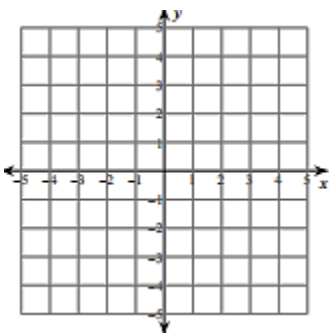$$\begin{cases} y = -1 \\ y = -\frac{5}{2}x + 4 \end{cases}$$

5.
$$\begin{cases} y = -\frac{1}{2}x - 1 \\ y = \frac{1}{4}x - 4 \end{cases}$$
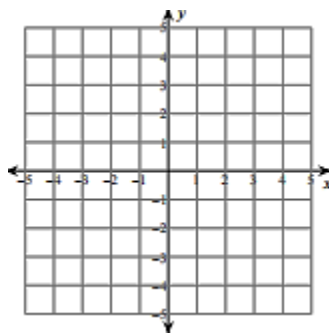
6.
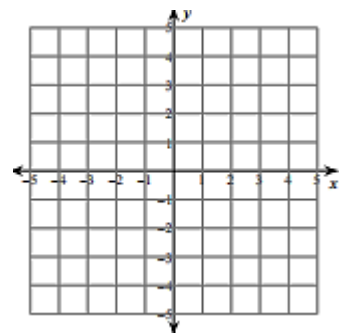$$\begin{cases} y = -2x + 2 \\ y = -2x - 2 \end{cases}$$

7.
$$\begin{cases} y - \frac{1}{2}x - 2 \\ y = -\frac{3}{2}x + 2 \end{cases}$$

8.
$$\begin{cases} y = \frac{1}{3}x - 3 \\ y = -x + 1 \end{cases}$$

9.
$$\begin{cases} y = x + 3 \\ y = x + 3 \end{cases}$$

10. Name the three type of solutions that a system of linear equations may have and why each will occur?

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

12. $\begin{cases} x - 4y = -4 \\ 5x - 4y = 12 \end{cases}$

13. $\begin{cases} x + y = 3 \\ 8x + y = -4 \end{cases}$

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

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

16. $\begin{cases} x - 3y = -6 \\ 2x - y = 3 \end{cases}$

For each type of solution that a system of equation may have, create an example of a system and provide the corresponding graphical representation.

17. $\{$ _____

18. $\{$ _____

19. $\{$ _____