

Name: _____

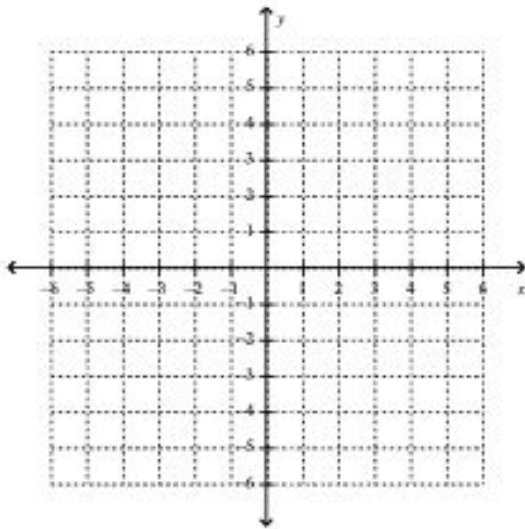
Period: _____

Systems: Solving Algebraically and Graphing Review

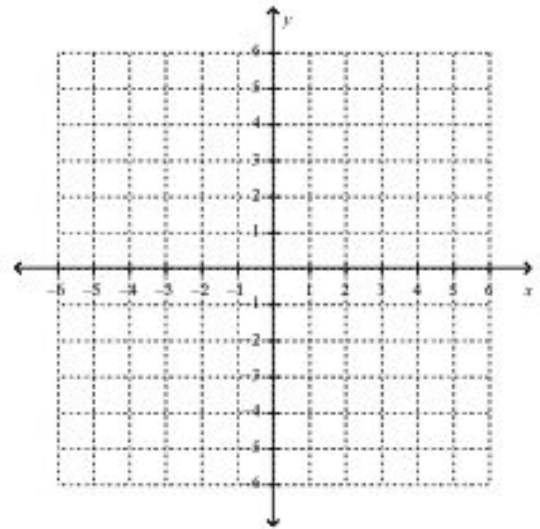
1.) Name the most important characteristic of a system.

Solve the following systems by graphing.

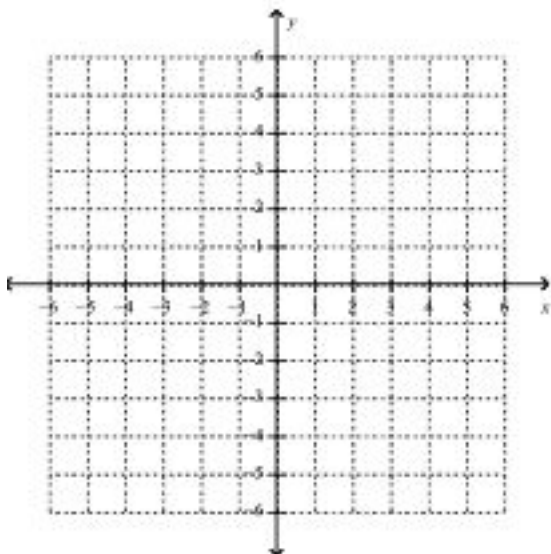
2.) 1)
$$\begin{cases} y = x + 3 \\ y = -2x + 3 \end{cases}$$



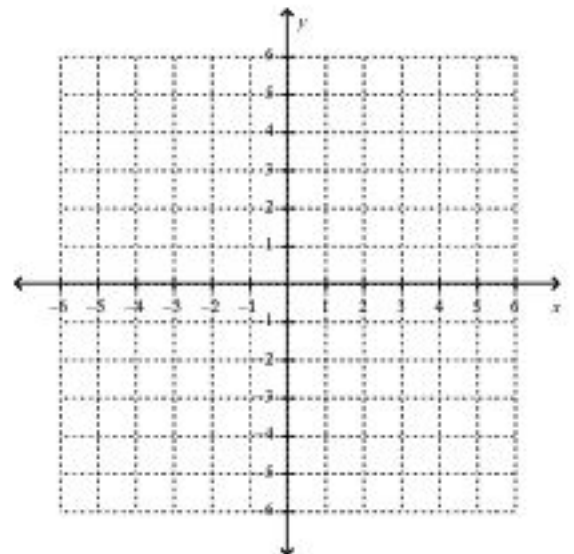
3.) 2)
$$\begin{cases} y = x + 2 \\ y = 4x - 1 \end{cases}$$



4.) 5)
$$\begin{cases} x = 5 \\ y = 2 \end{cases}$$



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



Identify without graphing if each system will have one solution, no solution, or infinitely many solutions.

6.)
$$\begin{aligned}x + y &= 1 \\x + y &= 5\end{aligned}$$

7.)
$$\begin{aligned}\frac{1}{2}x + 3y &= 1 \\x + 6y &= 2\end{aligned}$$

Solve each system algebraically.

9.)
$$\begin{cases}x + 3y = 11 \\2x + 3y = 4\end{cases}$$

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

11.)
$$\begin{cases}6x - 3y = 3 \\-6x + 5y = 3\end{cases}$$

12.) At a recreation and sports facility, 3 members and 3 nonmembers pay a total of \$180 to take an aerobics class. A group of 5 members and 3 nonmembers pay \$210 to take the same class. How much does it cost members and nonmembers to take an aerobics class?

13.) Marcello is an artist who makes oil paintings and charcoal sketches. He sells each oil painting for \$500 and each charcoal sketch for \$300. If Marcello wants to create 56 works in total, how many pieces of artwork must he sell in order to make exactly \$20,000?