

Notes 3-1A Solving Systems of Equations
Algebra II

Name _____

Period _____

A system of equations is _____.

A _____ is a system containing only linear equations.

There are 3 different types of solutions to a system of equations.

_____ solution * _____ solution * _____ solutions

Consistent System: at least one solution

Inconsistent System: no solutions

Independent System: only one solution

Dependent System: infinitely many solutions.

Graphs & tables can help us find solutions.

Ex: $y + 2 = x$ and $2x - 3y = 3$

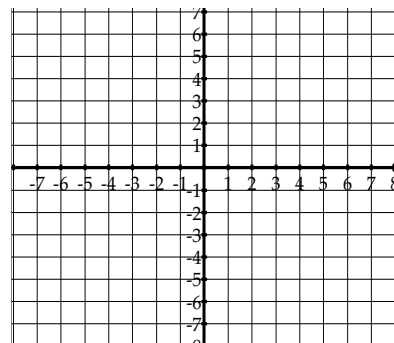
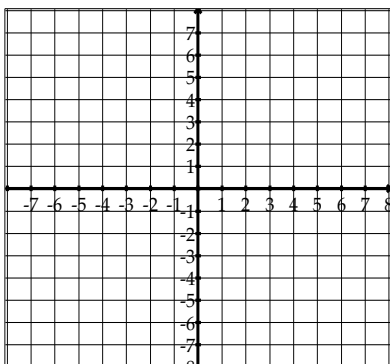
Ex: $3y + 6x = 3$ and $x - y = -7$

x	y

x	y

x	y

x	y



Classification:

Solution:

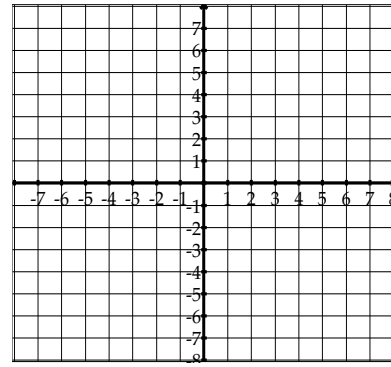
Classification:

Solution:

Ex: $x = 2y + 6$ and $3x - 6y = 18$

<u>x</u>	<u>y</u>

<u>x</u>	<u>y</u>



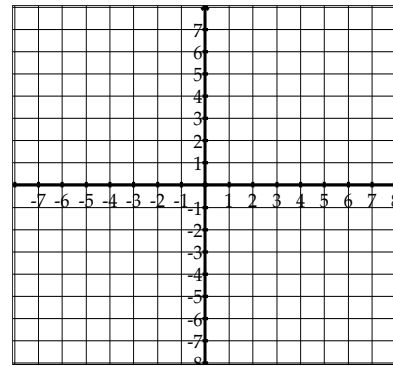
Classification:

Solution:

Ex: $y + 4 = x$ and $5y = 5x + 35$

<u>x</u>	<u>y</u>

<u>x</u>	<u>y</u>



Classification:

Solution:

Use your graphing calculator to find the solutions to the systems: (remember to solve for y first!)

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

$$\begin{cases} x = 2y + 6 \\ 3x - 6y = 18 \end{cases}$$

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

City Park Golf Club charges \$20 to rent clubs, plus \$55 per hour for cart rental. Sea Vista charges \$35 for clubs and \$45 per hour for cart rental. At how many hours is the cost the same for either course?

- 1) define your variables
- 2) write 2 equations
- 3) solve using algebra, table or graph.