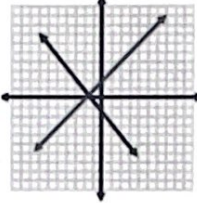
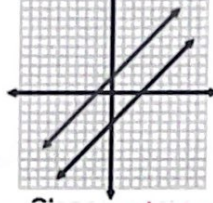
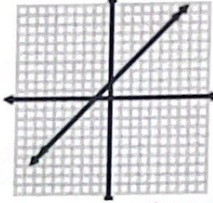
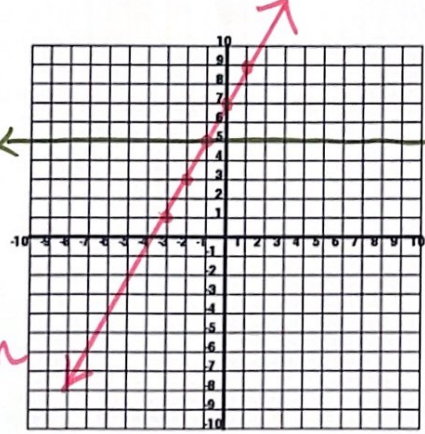
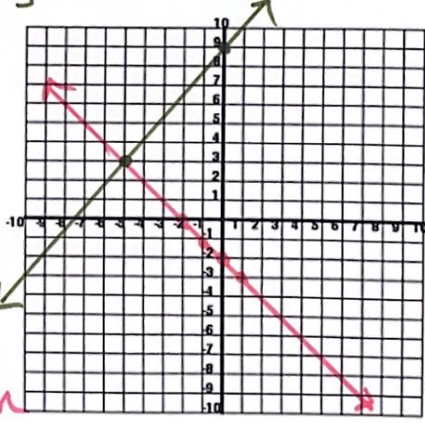


Name:

Date:

Period:

2.4 Solving Systems by Graphing & Substitution (review) Notes

System of Equations	Two or more equations make a system.		
<u>Types of Solutions</u>	<p><u>one</u> Solution</p> 	<p><u>no</u> Solution</p>  <p>- same slope parallel lines</p>	<p><u>infinite</u> Solutions</p>  <p>- same slope and y-intercept. same line</p>
Solve by Graphing	Solve each system of equations by graphing. Graph each line and identify the solutions. The solution is the <u>POINT OF INTERSECTION</u> .		
<p>Ex1:</p> $y = 5$ $y = 2x + 7$  <p>$(-1, 5)$ solution</p>	<p>Ex2:</p> <p>the values of x & y that make the equations true.</p> $6x - 5y = -45$ $-6x$ <hr/> $-5y = -6x - 45$ $\frac{-5y}{-5} = \frac{-6x - 45}{-5}$ $y = \frac{6}{5}x + 9$ $2x + 2y = -4$ $-2x$ <hr/> $2y = -2x - 4$ $\frac{2y}{2} = \frac{-2x - 4}{2}$ $y = -x - 2$  <p>$(-5, 3)$ solution</p>		

Use a coordinate pair for your solution (x, y)

Solve by Substitution

1. SOLVE one equation for x or y . (Isolate a variable).
2. SUBSTITUTE the resulting expression (what the variable is equal to) from Step 1 into the other equation for that variable.
3. SOLVE for the remaining variable.
4. SUBSTITUTE your answer from Step 3 into either original equation to find the other variables.
5. Write your solution as a coordinate pair.

(x, y)

Directions: Solve each system of equations below by substitution. Box your solution.

Ex3: $y = -5x + 30$
 $7x + 3y = 42$

$$7x + 3(-5x + 30) = 42$$
$$7x - 15x + 90 = 42$$
$$-8x + 90 = 42$$
$$-8x = -48$$
$$x = 6$$

$$y = -5(6) + 30$$
$$= -30 + 30$$
$$= 0$$

$(6, 0)$

Ex4:

$$2y = 6x + 10$$
$$3x - y = 5$$
$$y = \frac{6}{2}x + \frac{10}{2}$$
$$y = 3x + 5$$

$$3x - (3x + 5) = 5$$
$$3x - 3x - 5 = 5$$
$$0 - 5 = 5$$
$$-5 \neq 5 \text{ or } 0 \neq 10$$

no solution.
They are parallel lines