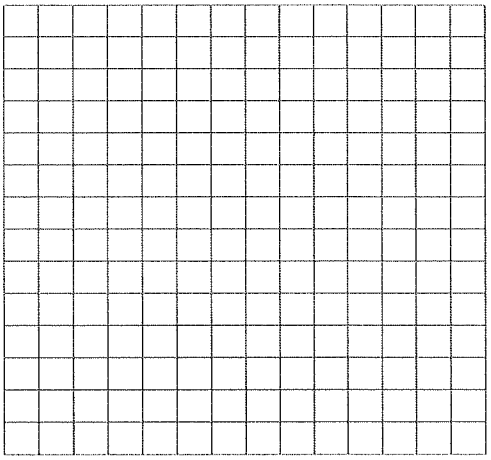
Algebra Foundations CW 8 Name: _____

Solving Systems with Substitution Notes Date: _____ Per:____

Solving Systems by Substitution: An algebraic method of finding the point(s) of intersection of two graphs.

Step 1: Isolate one variable in one equation, if one is not already alone.
Step 2: Substitute the resulting expression into other equation.
Step 3: You should now have an equation with just one variable. Solve that equation.
Step 4: Substitution the result from Step 3 into either equation to find the value of the remaining variable.
Step 5: Check your answer by ensuring that it makes both equations true.

1. $\begin{cases} 2x+3y=9 \\ y=5 \end{cases}$ Solve algebraically, then graph to check!



2. $\begin{cases} y=x-5 \\ x-2y=8 \end{cases}$

3. $\begin{cases} x+3y=12 \\ 2x-5y=-42 \end{cases}$

4. $\begin{cases} 2x+y=14 \\ 3x-4y=10 \end{cases}$

Algebra Foundations

Name_____ ID: 1

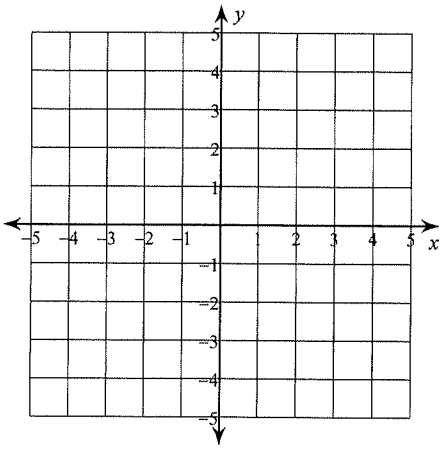
HW 8

Date_____ Period____

Solve each system by graphing.

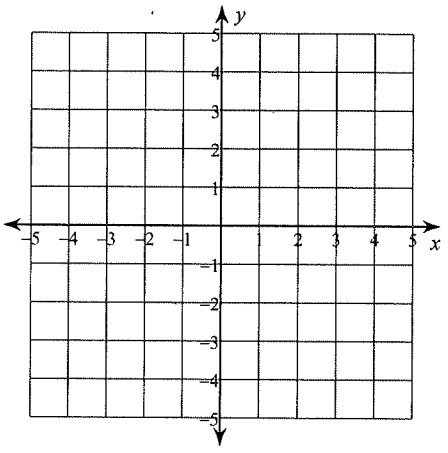
1) $y = \frac{5}{3}x - 3$

$y = \frac{1}{3}x + 1$



2) $y = \frac{1}{4}x + 3$

$y = -\frac{3}{2}x - 4$



Solve each system by substitution.

3) $5x - 2y = -16$

$y = -7$

4) $y = 7x + 16$

$3x + 6y = 6$

5) $y = -2x + 13$

$4x - 7y = -19$

6) $y = 3$

$6x - 5y = 15$

7) $-3x - 4y = -23$

$x - 3y = -14$

8) $7x + 3y = 5$

$3x + y = 1$

Algebra Foundations

Name_____ ID: 1

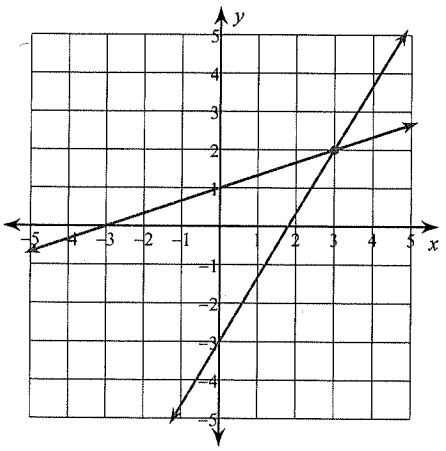
HW 8

Date_____ Period____

Solve each system by graphing.

1) $y = \frac{5}{3}x - 3$

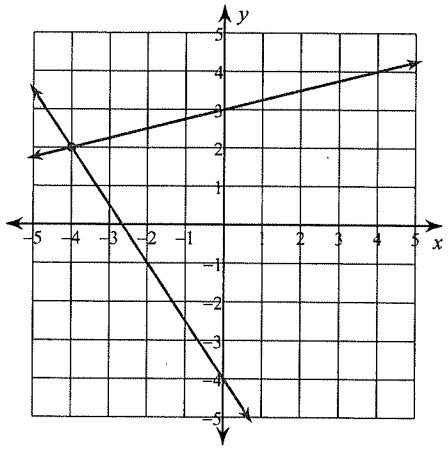
$y = \frac{1}{3}x + 1$



$(3, 2)$

2) $y = \frac{1}{4}x + 3$

$y = -\frac{3}{2}x - 4$



$(-4, 2)$

Solve each system by substitution.

3) $5x - 2y = -16$

$y = -7$

$(-6, -7)$

4) $y = 7x + 16$

$3x + 6y = 6$

$(-2, 2)$

5) $y = -2x + 13$

$4x - 7y = -19$

$(4, 5)$

6) $y = 3$

$6x - 5y = 15$

$(5, 3)$

7) $-3x - 4y = -23$

$x - 3y = -14$

$(1, 5)$

8) $7x + 3y = 5$

$3x + y = 1$

$(-1, 4)$