

Name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Class: \_\_\_\_\_

Algebra  
Unit 5  
HW 5-1

1) Is  $(2, 5)$  a solution to the following system?  
 $y = 4x - 3$

$$2x + y = 9$$

2) Find the solution to the system of equations graphically:  $y = \frac{1}{3}x + 1$

$$x + y = 5$$

3) Sam is racing his sister Sue. He gives her a 10 yard head start. Each second, Sam runs 2 yards and Sue runs 1 yard. How long will it take Sam to catch up to Sue?

4) The two lines  $y = 6x + 15$  and  $y = mx - 4$  intersect at  $x = -2$ .

(a) What is the  $y$ -coordinate of their intersection point?

(b) What is the value of  $m$ ?

5) Use a graph to determine the solution to the system of equations:

$$8y - 6x = 16 \qquad 3x = 4y - 12$$

6) Use a graph to determine the solution to the system of equations:

$$3x - 2y = -3 \qquad 4x = 16 - 4y$$

7) Is  $(2, \frac{3}{2})$  a solution to the following system

$$y = \frac{8-x}{4}$$

$$y = \frac{5}{4}x - 1$$