Name:_____Number:_____Period:_____Date:_____

Key Unit 13 Study Guide

Equations:

Solve each for the variable indicated. Show all steps.

1) Solve for y: $6x + 3y = 18$

$y = -2x + 6$

2) Solve for x: $4x + 1 - 4y = -(2x - 1) + 3y$

$y = 7/6\ y$

Solve each equation for x. Show all steps.

3) $3 + 2(x - 1) = 3x - 4$

$x = 5$

4) $-(2 - 4x) = 2(2x - 1)$

all #s

5) $6x + 4 = -6x + 4$

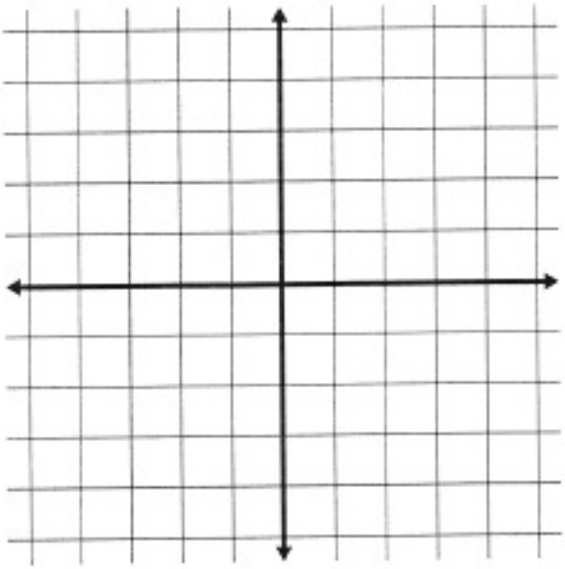
$x = 0$

6) $\frac{x}{2} + \frac{x+1}{3} = \frac{5x}{6} + 1$

No solution

Graphing

7) Graph $y = -x + 2$ below. Find the y and x-intercepts. Give each as a ordered pair.

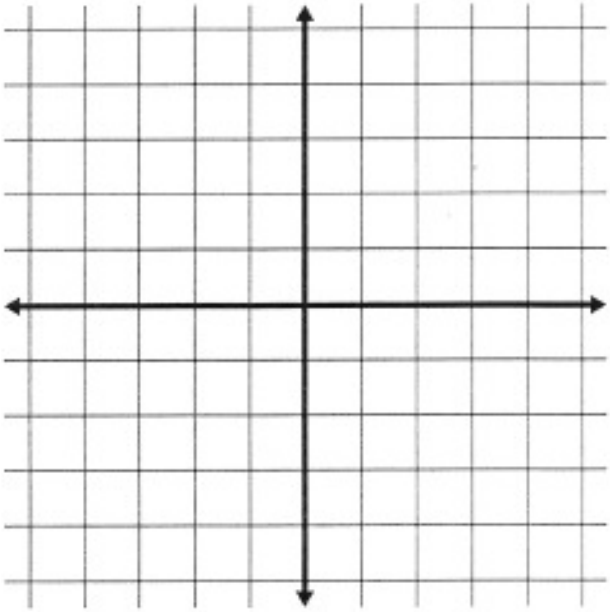


y-int (0,2)

x-int (2,0)

Systems of Equations

8) Graph y = 2x - 5 and y = -3x + 5 on the coordinate gride below. What is the point of intersection?



(2, -1)

10) Is (2, 5) a solution to the system of equations : y = 3x – 4 and y = x – 3? Show your work.

NO

11) Solve the system of equations algebraically: y = 3x + 4 and y = 5x – 8.

(6, 22)

Use for 12 – 14.
Two companies offer different rental packages for skis. The first company, Winter Wonders, requires a deposit of $10 and charges $40 per day. The second company, Snow Source, requires a deposit of $40 and charges $30 per day.

12) Write an equation for each company that represents the charges to rent skis.

WW: y = 40x + 10

SS y = 30x + 40

13) Use any method to find the point of intersection

$(3, 130)$

$40x + 10 = 30x + 40$
$-30x - 10 \quad -30x \quad -10$

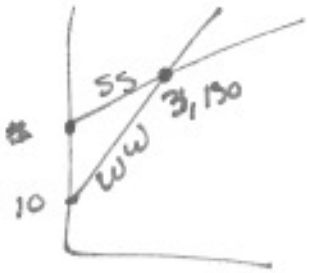
$\frac{10x = 30}{10}$ $\quad x = 3$

$y = 30(3) + 40$
$y = 90 + 40$
$y = 130$

14) What does the solution or point of intersection mean in terms of this problem?

Both companies charge $130 for a 3 day rental.

15) Which company should you choose? Why?



Less than 3 days, WW
more than 3 days, SS