Name KEY

Math 8CP
Practice Quiz 5.1 to 5.2

1) Tell whether the ordered pair is a solution of the linear system. Show your work in the space. Write yes or no on the line.

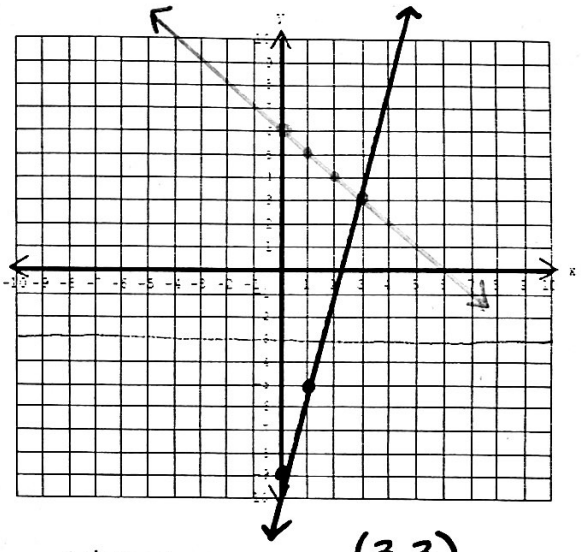
(1, 2)
2y - x = 3
y + 4 = 4x

$2(2)-1 \stackrel{?}{=} 3$
$4-1 \stackrel{?}{=} 3$
$3=3$ ✓

$2+4 \stackrel{?}{=} 4(1)$
$6 \neq 4$

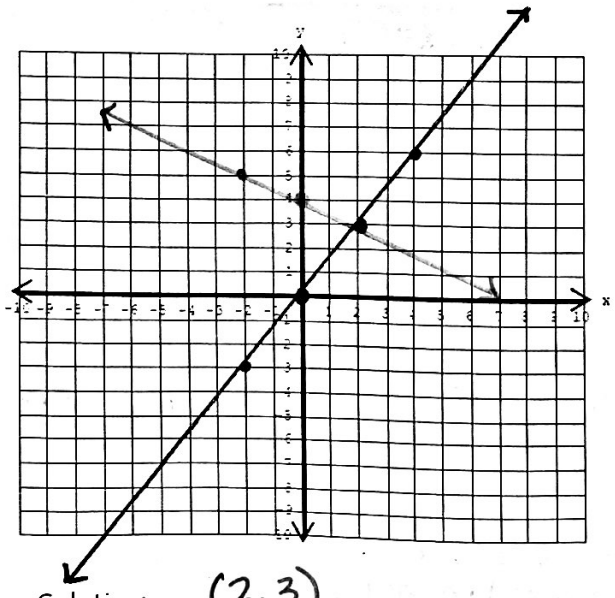
Yes or No: NO

2) Solve the system by graphing.
$y = 4x - 9$ and $y = -x + 6$



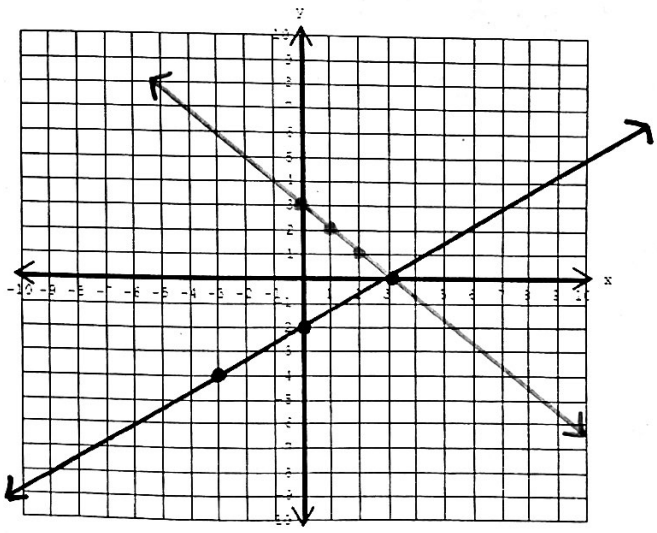
Solution: (3,3)

3) Solve the system by graphing.
$y = \frac{3}{2}x$ and $y = -\frac{1}{2}x + 4$



Solution: (2,3)

4) Solve the system by graphing.
$y = \frac{2}{3}x - 2$ and $x + y = 3$
$y = -x + 3$



Solution: (3,0)

5) It costs a store owner $8 per CD and a copyright fee of $120. The store owner sells the CDs for $14 each. Find the break-even point by using a table. (Note: You do NOT need to fill in all of the boxes).

C = 8x + 120 R = 14x

x	5	10	15	20	25
C	160	200	240	280	320
R	70	140	210	280	350

How many CDs does the store owner have to sell to break even? 20 CDs.

Solve each system using substitution. Show your work. Your answer MUST be a coordinate point in (x,y) format and written on the line provided.

6) $y = 3x$
$2x + y = 15$ Answer: (3,9)

$2x+(3x)=15$
$5x=15$
$x=3$
$y=3(3)$
$y=9$

7) $y = 4x-1$
$y = 2x-5$ Answer: (-2,-9)

$4x-1=2x-5$
$+1 \quad +1$
$4x=2x-4$
$-2x-2x$
$2x=-4$
$x=-2$

$y=4(-2)-1$
$=-8-1$
$=-9$

8) $x = 2y-1$
$3y = x+4$ Answer: (5,3)

$3y=2y-1+4$
$3y=2y+3$
$-2y-2y$
$y=3$

$x=2(3)-1$
$x=6-1$
$=5$

9) $y = 5x-8$
$4x+3y=33$ Answer: (3,7)

$4x+3(5x-8)=33$
$4x+15x-24=33$
$19x-24=33$
$+24 \quad +24$
$19x=57$
$x=3$

$y=5(3)-8$
$=15-8$
$=7$

10) Write two equations and then solve.
There are a total of 38 snowboarders and skiers in the NPHS snowboard ski club. The number of snowboarders is two more than five times the number of skiers.

$(2+5s)+s=38$
$2+6s=38$
$-2 \quad -2$
$6s=36$
$s=6$

$B+6=38$
$B=32$

Equation 1: $B+S=38$ Equation 2: $B=2+5s$

Solution in words: 6 skiers
32 boarders