3.1 H.W. ?'s 22, 26, 19.

19. $\begin{cases} 2+y=x \\ x+y=4 \end{cases}$

$y=x-2$

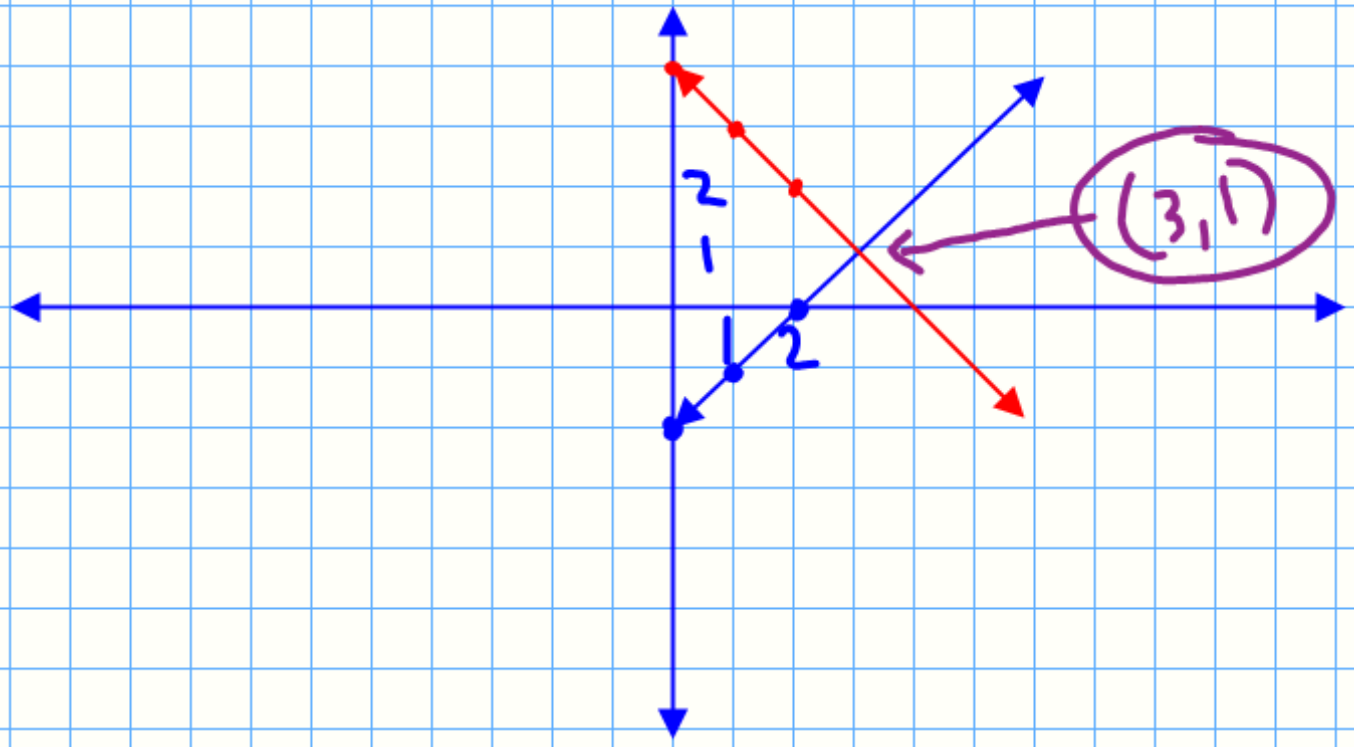
$2+y=x$

x	y
0	-2
1	-1
2	0

$y=-x+4$

$x+y=4$

x	y
0	4
1	3
2	2



$y = mx + b$

22. $\begin{cases} y = 10 - x \\ 3x - 3y = 0 \end{cases}$

$y = 10 - x$

$y = -x + 10$

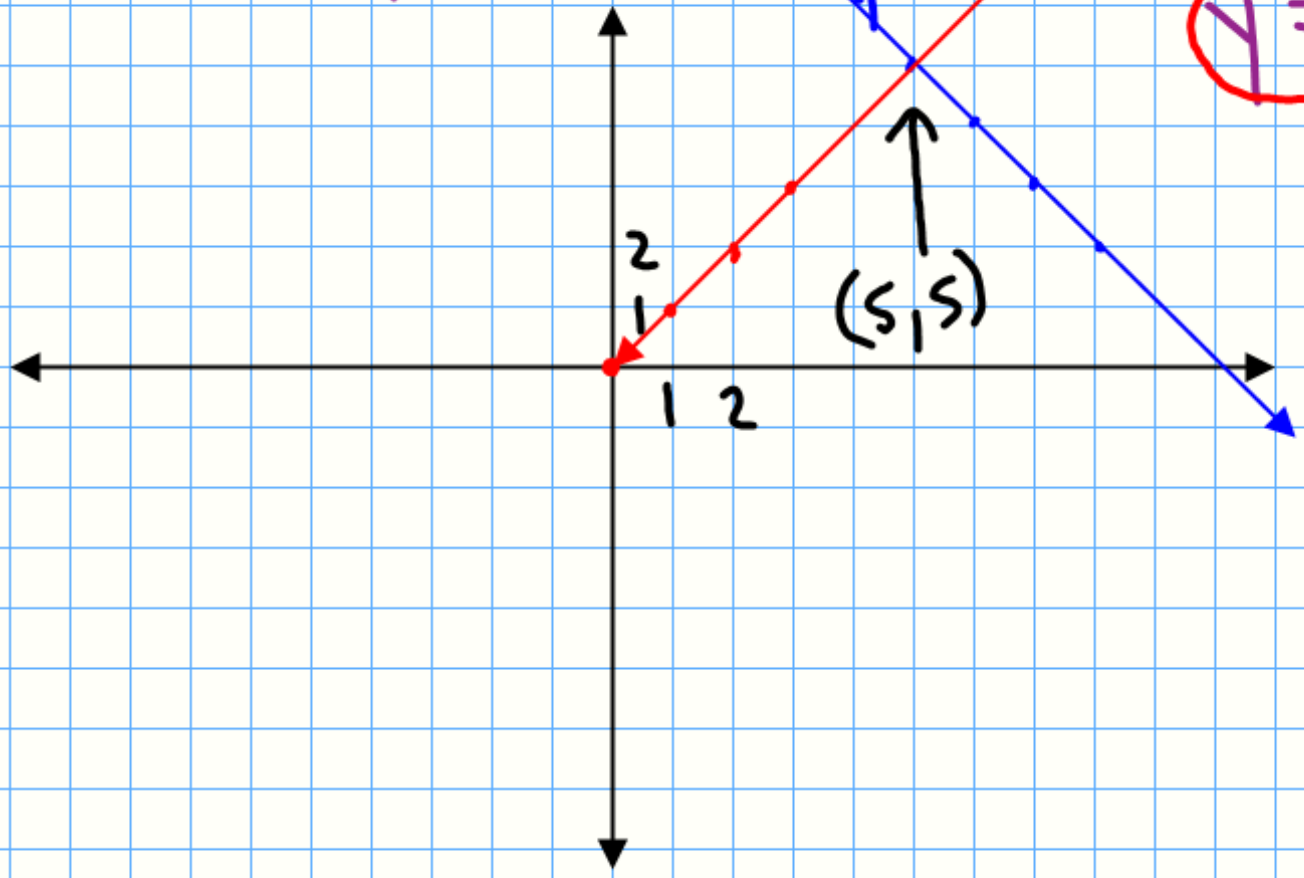
$3x - 3y = 0$

$+3y = +3x$

$+3 \quad +3$

$y = x$

x	y
0	0
1	1
2	2



$y = mx + b$

26. $\begin{cases} 3y = 2x \\ -4x + 6y = 3 \end{cases}$

$3y = 2x$ $\quad -4x + 6y = 3$

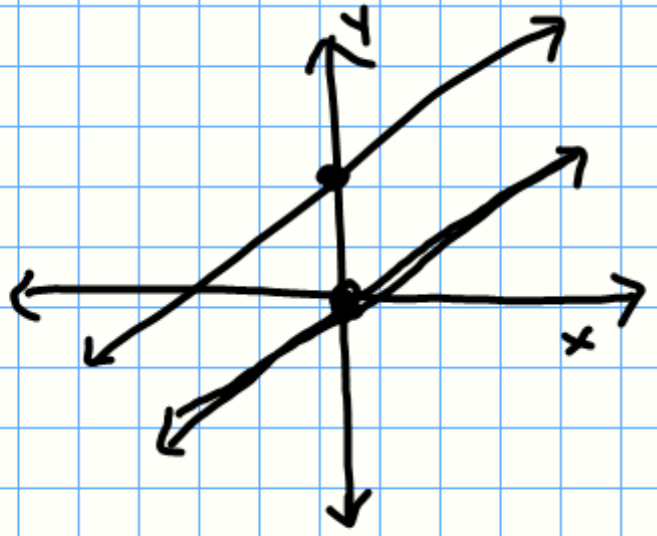
$y = \frac{2}{3}x + 0$ $\quad \frac{6y}{6} = \frac{4x + 3}{6}$

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

Same slope

different y-intercepts.

no solution.
inconsistent



3.2 Using Algebraic Methods to Solve Linear Systems.

CA Standard 2.0 9/18/09

Ex.1 $\begin{cases} y = x+2 \\ x+y = 8. \end{cases}$

$x + (x+2) = 8$

$2x + 2 = 8$

$2x = 6$

$\boxed{x = 3}$

$y = 3+2$

$3+y = 8$

$-3 \quad -3$

(3, 5)

Step 1.

Solve any equation for 1 variable.

Step 2

Substitute expression into other equation.

Step 3

Solve for variable remaining.

Ex. 1b. $\begin{cases} 2x+y=6 \\ y-8x=1 \Rightarrow y=8x+1 \end{cases}$

$2x+(8x+1)=6$

$10x+1=6$

$10x=5$

$x=\frac{1}{2}$

$y=8x+1$

$y=8\left(\frac{1}{2}\right)+1$

$y=4+1$

$y=5$

$\left(\frac{1}{2}, 5\right)$

7.

$2\left(\frac{1}{2}\right)+5=6$

$1+5=6$ ✓

Vit out 1a.

a (2,7)

b. (4,7)

c (7,2)

d. (7,4)

$y = 2x - 1$

$3x + 2y = 26$

$3x + 2(2x-1) = 26$

$3x + 4x - 2 = 26$

$7x - 2 = 26$

$7x = 28$

$\frac{7x}{7} = \frac{28}{7}$

$x = 4$

$y = 2x - 1$

$y = 2(4) - 1$

$y = 7$

A. $\begin{cases} 2x + 3y = 34 \\ +(4x - 3y = -4) \end{cases}$

$6x = 30$

$x = 5$

$2(5) + 3y = 34$

$10 + 3y = 34$

$3y = 24$

$y = 8$

$(5, 8)$

Without 2a.

a) $(\frac{3}{4}, -2)$ ✓

b) $(\frac{3}{4}, -4)$

c) $(\frac{1}{2}, -4)$

d) $(\frac{1}{2}, -2)$

e) ?!?!?

$$4x + 7y = -25 \quad ✓$$
$$+ \quad -12x - 7y = 19$$

$$\frac{-8x}{-8} = \frac{-6}{-8}$$

$$x = \frac{3}{4}$$

$$4(\tfrac{3}{4}) + 7y = -25$$
$$3 + 7y = -25$$
$$7y = -28$$
$$y = -4$$

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

$$+\quad \begin{array}{r} 6x+12y=-30 \\ -6x-6y=6 \end{array}$$

$$\frac{6y}{6}=\frac{-24}{6}$$

$y=-4$

$(3,-4)$

$2x+4(-4)=-10$

$2x-16=-10$

$2x=6$

$x=3$

Unit 2b

a) (6, -4)

b) (6, -5)

c) (4, -4)

d) (-5, -4)

e) ?.?.?.

$5(5x - 3y = 42)$

$3(8x + 5y = 28)$

$25x - 15y = 210$

$+\ 24x + 15y = 84$

$49x = 294$

$\frac{49x}{49} = \frac{294}{49}$

$x = 6$

$30 - 3y = 42$

$-3y = 12$

$y = -4$

42 / 5 / 210

28 / 3 / 84

P.194 #6

a) (4, -2)

b) (7, 2)

c) (7, -2)

d) (-2, 4)

e) ?????

$2(7) + y = 12$

$14 + y = 12$

$y = -2$

$2x + y = 12$

$-5x + y = -33$

$\frac{-3x}{-3} = \frac{-21}{-3}$

$x = 7$

p.194 #20

a (3, 5)

b (5, 3)

c (5, 8)

d (3, 8)

e ?????

$6(3) - 3y = -6$

$18 - 3y = -6$

$-7(6x - 3y = -6)$

$-3y = -24$

$3(-5x + 7y = 41)$

$y = 8$

$42x - 21y = -42$

$-15x + 21y = 123$

$27x = 81$

$\frac{27x}{27} = \frac{81}{27}$

$x = 3$

123
42
81

3.1 Ex. 4

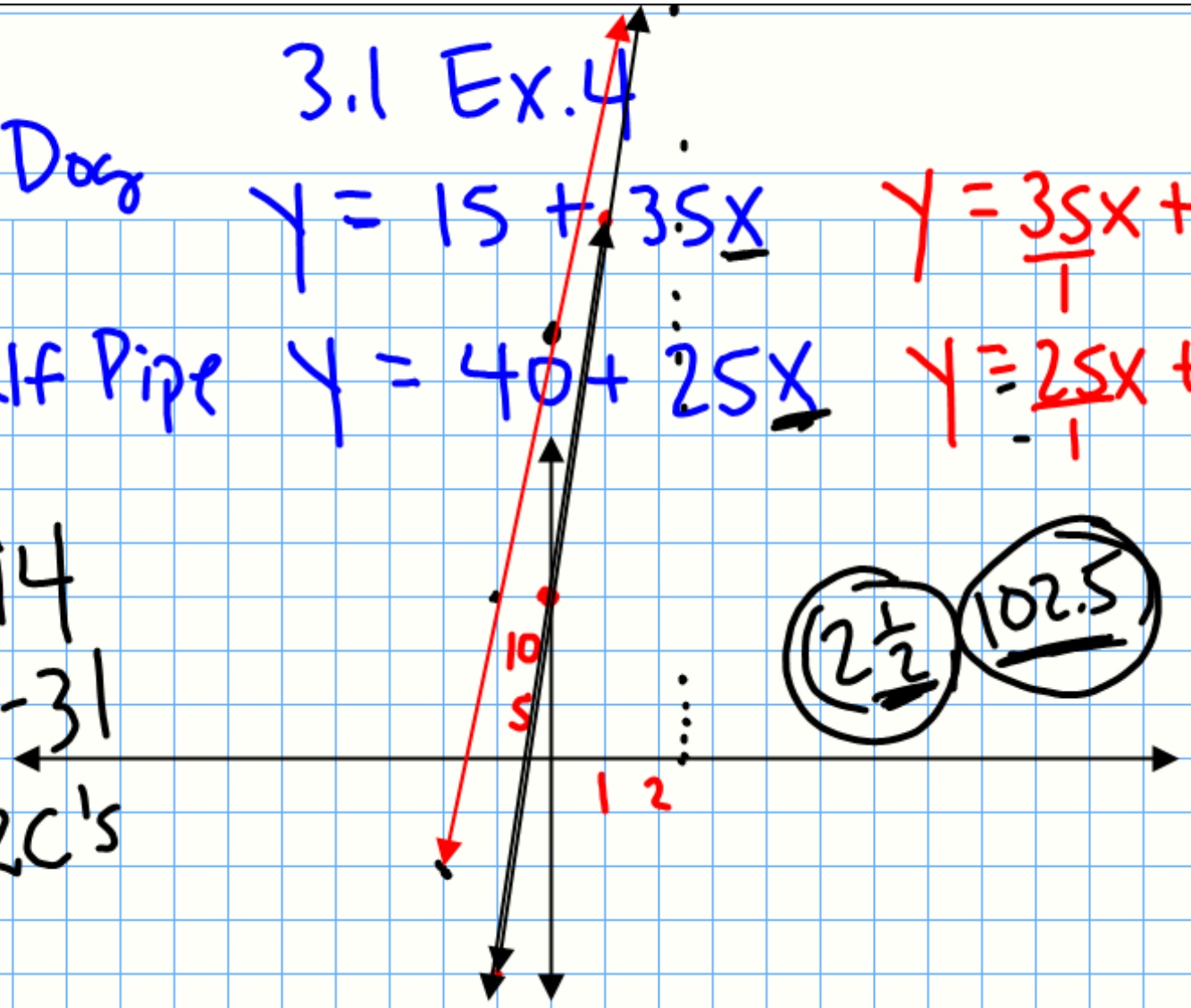
Big Dog $y = 15 + 3.5x$ $y = \frac{3.5x}{1} + 15$

Half Pipe $y = 40 + 2.5x$ $y = \frac{2.5x}{1} + 40$

P. 194

17-31

2 RC's



$2\frac{1}{2}$ 102.5