MAT1340 WP#4 Lawley 1

49.5/70

1. $2x+5y=20$

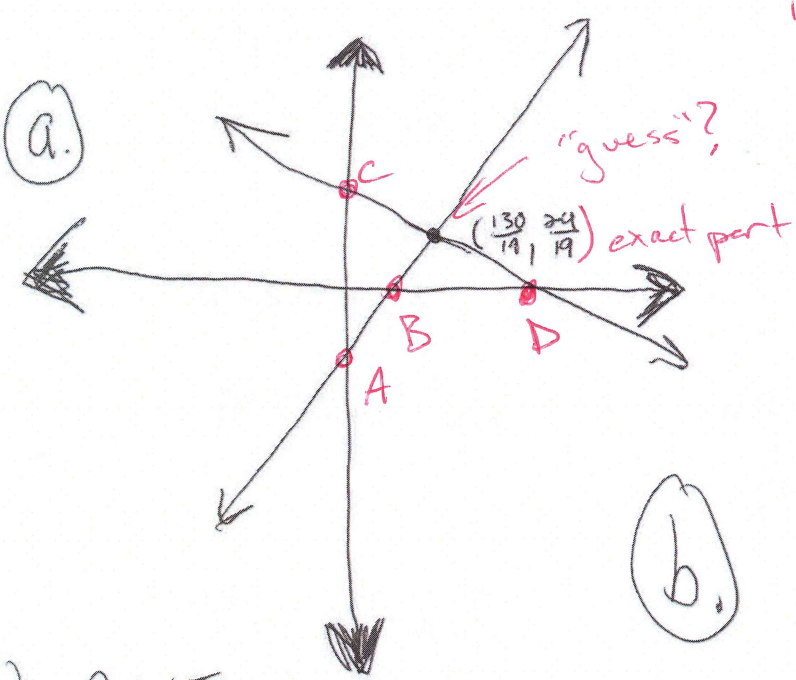
$3x-2y=18$

x	y
0	4 C
10	0 D

x	y
0	-9 A
6	0 B

NO intercepts, no work shown – where did the picture come from?

a.



"guess"?

$\left(\frac{130}{19}, \frac{24}{19}\right)$ exact part

+6

b. $2x+5y=20$

$3x-2y=18$

c. $2x+5y=20$

$3x-2y=18$

$4x+10y=40$

$15x-10y=90$

$19x=130$

$x=\frac{130}{19}$ +7

Supposed to show finding x AND y in both steps (b and c)

$2x+5y=20$

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

$2\left(6+\frac{2}{3}y\right)+5y=2$

$12+\frac{4}{3}y+5y=20$

$12+\frac{19}{3}y=20$

$y=\frac{24}{19}$

$36+19y=60$

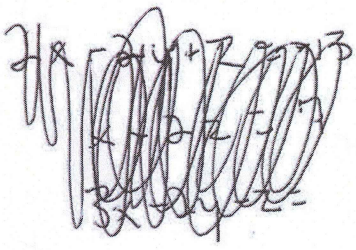
$19y=24$ +7

MAT1340 WP# 4 Lawley 2

② $2x-2y+z=-13$

$3x-5y-z=-21$

$x-2z=7$



$4x-4y+2z=-26$

$x-2z=7$

$5x-4y=-19$

$5x-4(5)=-19$

$5x-20=-19$

$x=\frac{1}{5}$

$2x-2y+z=-13$

$3x-5y-z=-21$

$5x-7y=-13-21$

$5x-7y=-34$

$5x-7y=-34$

$-5x+4y=19$

$-3y=-15$

$y=5$

$\frac{1}{5}-2z=7$

$-2z=7-\frac{1}{5}$

$-2z=-\frac{34}{5}$

$z=-\frac{17}{5}$

$(x,y,z)=(\frac{1}{5},5,-\frac{17}{5})$

+10

MAT1340 WP# 4 Lawley 3

(3). $7x+17y+27z=30$

$2x+5y+8z=8$

$x+2y+3z=6$

$7x+17y+27z=30$

$-7x-14y-21z=-42$

$3y+6z=-12$

$y+2z=-4$

$y=-4-2z$

$x+2(-4-2z)+3z=6$

$x-8-4z+3z=6$

$x-8-z=8$

$x=14+z$ ✓

$2x+5y+8z=8$

$-2x-4y-6z=-12$

$y+2z=-4$

$y+2z=-4$

$y=-4-2z$ ✓

$(x,y,z)=(14+z,-4-2z,z)$ ✓

b) I do not see any work relating to part b. +10

MAT1340 WP#4 Lawley 4

(4) $7x+17y+27z=30$

$2x+5y+8z=3$

$x+2y+3z=6$

$3y+2z=-9$

$\frac{3y}{3} = \frac{-9-2z}{3}$

$y=-3-2z$

$7x+17y+27z=30$
$-7x-14y-21z=-42$
$3y+6z=-12$

$2x+5y+8z=3$
$-2x-4y-6z=-12$
$3y+2z=-9$

$3y+6z=-12$

$\frac{6z}{6} = \frac{-12-3y}{6}$

$z=-2-3y$

$x+2(-3-2z)+3(-2-3y)=6$

~~Start~~ $x-6-4z-6-9y=6$

~~$x-12-4z-9y=6$~~

$x-12-4z-9y=6$

$3y+6z=-12$

$y+2z=-9$

$-y-2z=12$

$y+2z=-9$ NO

$0=-5$

$-12-9=-21$

you forget to divide

-12 by $-3 \rightarrow \frac{-12}{-3}=4$

$4-9=-5$

(4). Part 2...

This system of linear equation has no solution because there is no way to isolate a single variable, Therefore making it impossible to actualy make a solution set. It is absurd because when working through the homework problems we were faced with systems that could be solved by using, elimination, substitu or graphing. When using the elimination method the answer comes out to $0 = -5$ which is an absurd answ There is NO solution to this system of equations, but as you know problem 3 is very similar to problem 4. Just by changing a few numbers you have a system with a solution.

+9.5