Practice Problems for Review in Class

Section: EII.C: Equations and Inequalities

(1.) $5(x-7)=3x-17$

$\Rightarrow 5x-35=3x-17$

$\Rightarrow 2x=18$

$\Rightarrow x=9$

(2.) $\frac{3x}{4}-\frac{1}{3}=1-\frac{2}{3}\left(x-\frac{1}{6}\right)$

$\Rightarrow \frac{3x}{4}-\frac{1}{3}=1-\frac{2}{3}x+\frac{2}{18}$

$\Rightarrow 27x-12=36-24x+4$

$\Rightarrow 57x=52 \Rightarrow x=52/57$

(3.) Solve and graph the solution to: $16-x \le 5x+12-2x < 24-x$

$\Rightarrow 16-x \le 3x+12 < 24-x$

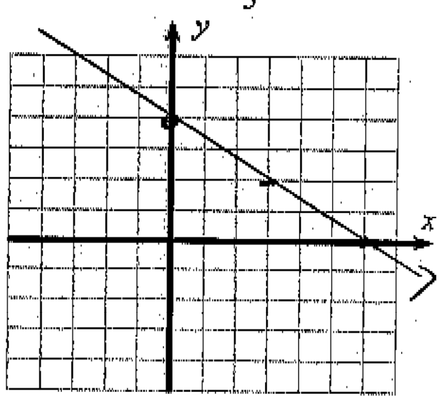
$\Rightarrow 16 \le 4x+12 < 24$

$\Rightarrow 4 \le 4x < 12$

$\Rightarrow 1 \le x < 3$

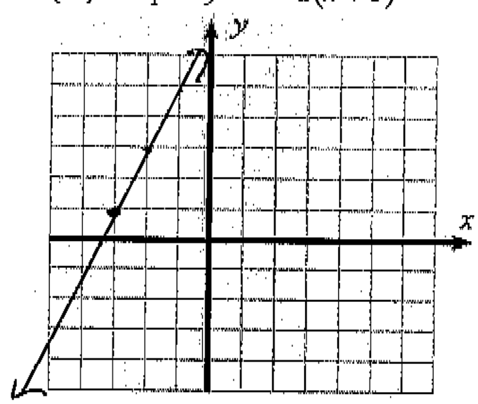
Section: EII.E: Graphing Lines

(4.) Graph: $y=-\frac{2}{3}x+4$ (sketch the axes)



(5.) Graph: $y-1=2(x+3)$

(-3, 1)



(6.) Find the equation of the line with slope 2 and y-intercept -3.

$y=2x-3$

(7.) Find the equation of the line with slope $\frac{1}{3}$ that includes the point $(2,-4)$.

$y+4=\frac{1}{3}(x-2)$

(8.) Perpendicular lines have: slopes whose product is -1.

Section: EII.F: Absolute Value

(9.) Solve: $|2x-1|+3=8$

$\Rightarrow |2x-1| = 5$

$\Rightarrow 2x-1 = \pm 5$

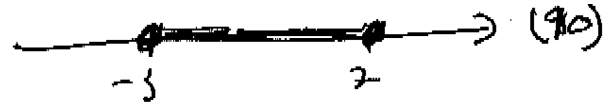
$\Rightarrow 2x = 1 \pm 5$

$\Rightarrow x = \frac{1\pm 5}{2}$ $\Rightarrow$ $x=3$ OR $x=-2$

(10.) Solve and graph the solution to: $|x-2|\leq 5$

$\Rightarrow -5 \leq x-2 \leq 5$

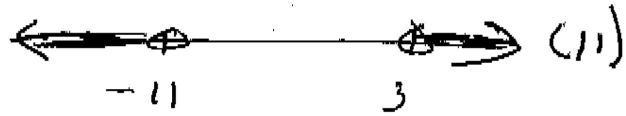
$\Rightarrow -3 \leq x \leq 7$



(11.) Solve and graph the solution to: $|x+4|>7$

$\Rightarrow x+4 > 7$ OR $x+4 < -7$

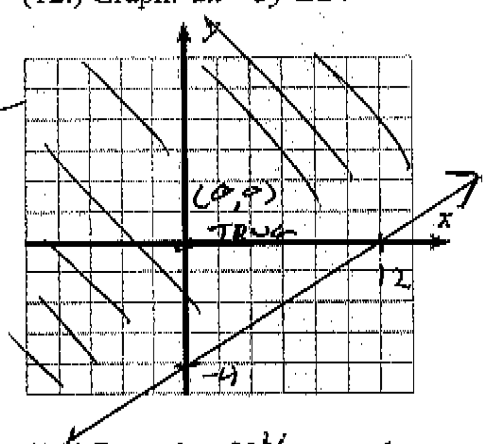
$\Rightarrow x > 3$ OR $x < -11$



Section: 4.3: Graphing Inequalities

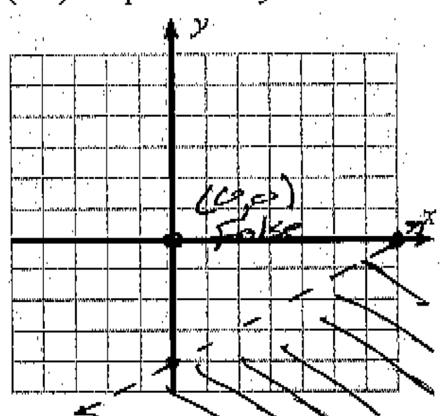
(12.) Graph: $2x-3y\leq 24$

x	y
0	-8
12	0



(13.) Graph: $4x-7y>28$

x	y
0	-4
7	0



(14.) Dusty has $2~~0~~4 to spend on candy for his wife. If peanut M&Ms are $4/lb and lemon drops are $3/lb, graph an inequality that represents how much of each he can buy.

p = # lbs of M&Ms

L = # lbs of lemon drops

$$\begin{cases} 4p + 3L \leq 24 \\ p \geq 0 \\ L \geq 0 \end{cases}$$

p	L
0	8
6	0