121 §1.7 I #s 20, 24, 28, 34, 39, 41, 46

#s 15-26 Solve each inequality. Write the solution set using interval notation and graph it. I'd graph 1st, myself!

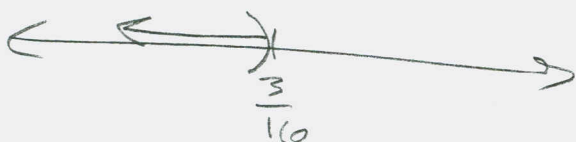(20) $\frac{1}{2} - x > \frac{x}{3} + \frac{1}{4}$

LCD = 12

$(12)(\frac{1}{2}) - 12(x) > 12(\frac{x}{3}) + 12(\frac{1}{4})$

$6 - 12x > 4x + 3$
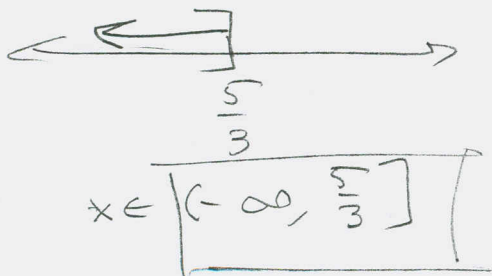
$-12x > 4x - 3$

$-16x > -3$

$x < \frac{3}{16}$

$$\frac{3}{16}$$

$x \in \boxed{(-\infty, \frac{3}{16})}$

(24) $\frac{5-3x}{-7} \leq 0$

$5 - 3x \geq 0$

$-3x \geq -5$

$x \leq \frac{5}{3}$

$$\frac{5}{3}$$

$x \in \boxed{(-\infty, \frac{5}{3}]}$

#s 27-30 Solve each inequality by reading the graph.

(28)

$y = 1.2x - 3$

(2.5, 0)

(0, -3)

x

y

$1.2x - 3 \geq 0$ when

$x \geq 2.5$
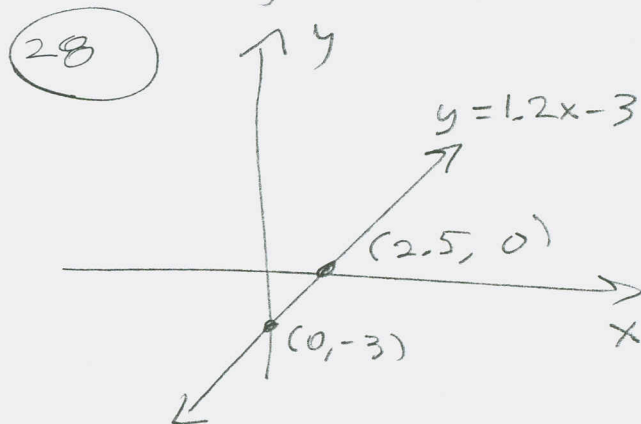
2.5
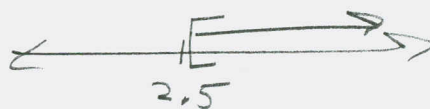
$x \in \boxed{[2.5, \infty)}$

121 §1.7I #s 34, 39, 41, 46

#s 31-34 Same instructions

$\rightarrow y = x + 1$

(34) $x + 1 > -3x - 7$

when $x > -2$

$\longleftarrow \quad \overset{(}{\underset{-2}{\mid}} \longrightarrow \quad \rightarrow$

$x \in \boxed{(-2, \infty)}$

$(-2, -1)$ $\searrow y = -3x - 7$
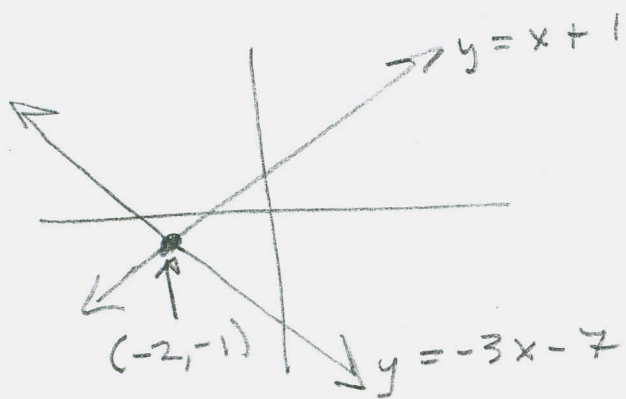
#s 35-44 Write as a single interval

(39) $(-\infty, -2) \cap (-5, \infty)$
                  $\overset{\curvearrowright}{AND}$

$\longleftarrow \quad \overset{(}{\underset{-5}{\mid}} \quad \overset{)}{\underset{-2}{\mid}} \longrightarrow$

No   -5   Yes   -2   No

$x \in \boxed{(-5, -2)}$

(41) $(-\infty, -5) \cap (-2, \infty)$

$\longleftarrow \quad \overset{)}{\underset{-5}{\mid}} \quad \overset{(}{\underset{-2}{\mid}} \longrightarrow$

No -5 No -2 No

$\boxed{\varnothing}$
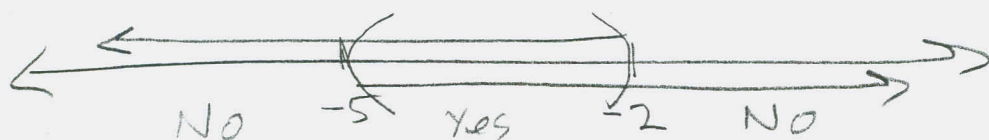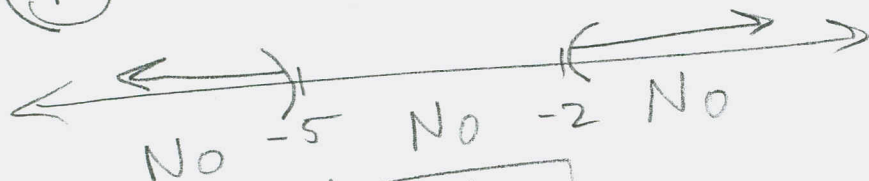
#s 45-58 Solve each compound inequality.
Write soln set with interval notation
and graph it.

121 $ 1.7 I #46

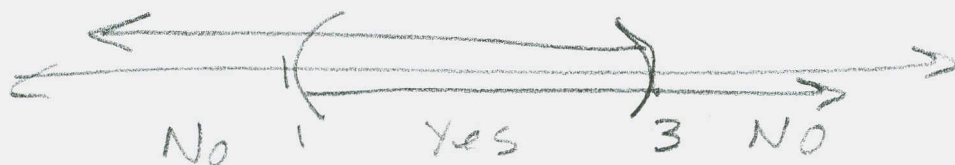$$5 - x < 4 \quad \text{and} \quad 0.2x - 5 < 1$$

$$-x < -1 \qquad\qquad .2x < 6$$

$$x > 1 \qquad\qquad\qquad 2x < 60$$

$$\qquad\qquad \text{AND} \qquad x < \frac{60}{2} = 30$$

$$\qquad\qquad\qquad\qquad x < 30$$

No   1   Yes   3   NO

$$x \in (1, 30)$$