

Assign #5

New

Book pg 52: 11, 13, 27, 31, 33, 35, 37

11. $|x+2| > 3$

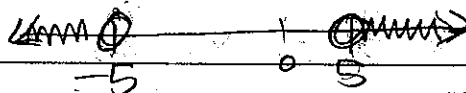
$$\begin{array}{r} x+2 > 3 \\ -2 \quad -2 \\ \hline \end{array}$$

$$x > 1$$

$$\begin{array}{r} x+2 < -3 \\ -2 \quad -2 \\ \hline \end{array}$$

$$x < -5$$

$$x < -5 \text{ or } x > 1$$



13. $|3x+12| > 42$

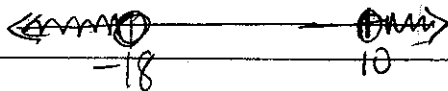
$$\begin{array}{r} 3x+12 > 42 \\ -12 \quad -12 \\ \hline 3x > 30 \\ \frac{3x}{3} > \frac{30}{3} \\ \hline \end{array}$$

$$x > 10$$

$$\begin{array}{r} 3x+12 < -42 \\ -12 \quad -12 \\ \hline 3x < -54 \\ \frac{3x}{3} < \frac{-54}{3} \\ \hline \end{array}$$

$$x < -18$$

$$x < -18 \text{ or } x > 10$$



27. $|8x| \leq 10$

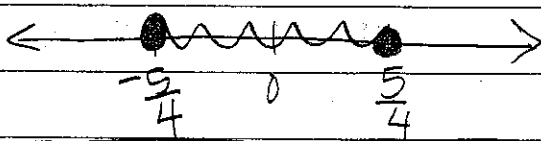
$$\begin{array}{r} 8x \leq 10 \\ \frac{8x}{8} \leq \frac{10}{8} \\ \hline \end{array}$$

$$x \leq \frac{5}{4}$$

$$\begin{array}{r} 8x \geq -10 \\ \frac{8x}{8} \geq \frac{-10}{8} \\ \hline \end{array}$$

$$x \geq -\frac{5}{4}$$

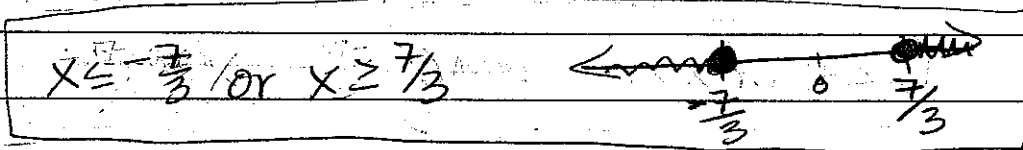
$$-\frac{5}{4} \leq x \leq \frac{5}{4}$$



$$36. |3x| \geq 7$$

$$\begin{array}{l} \swarrow \\ 3x \geq 7 \quad 3x \leq -7 \\ \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \\ 3 \quad 3 \quad 3 \quad 3 \end{array}$$

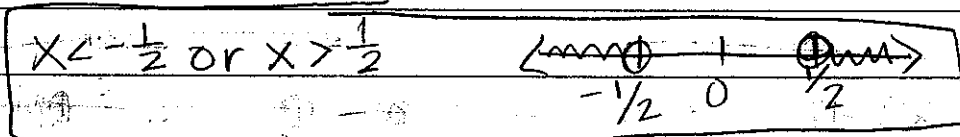
$$x \geq \frac{7}{3} \quad x \leq -\frac{7}{3}$$



$$33. |2x| > 1$$

$$\begin{array}{l} \swarrow \\ 2x > 1 \quad 2x < -1 \\ \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \\ 2 \quad 2 \quad 2 \quad 2 \end{array}$$

$$x > \frac{1}{2} \quad x < -\frac{1}{2}$$



$$35. |x-6| \leq -12$$

no solution

$$37. |3x+11| > 1$$

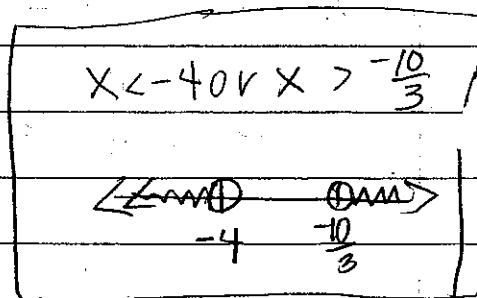
$$\begin{array}{l} \swarrow \\ 3x+11 > 1 \quad 3x+11 < -1 \\ \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \\ -11 \quad -11 \quad -11 \quad -11 \end{array}$$

$$\begin{array}{l} 3x > -10 \quad 3x < -12 \\ \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \quad \underline{\quad} \\ 3 \quad 3 \quad 3 \quad 3 \end{array}$$

$$x > -\frac{10}{3}$$

$-3\frac{1}{3}$

$$x < -4$$



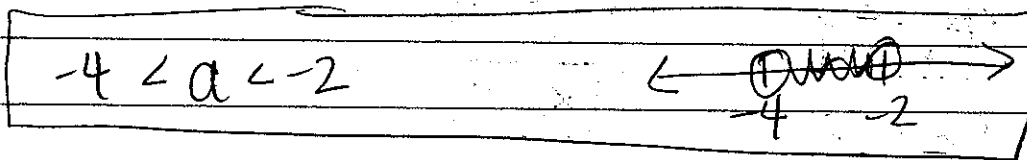
Assign #5 cont.

1) Packet

$$1. |a+3| < 1$$

$$\begin{array}{l} a+3 < 1 \\ \underline{-3 \quad -3} \end{array} \quad \begin{array}{l} a+3 > -1 \\ \underline{-3 \quad -3} \end{array}$$

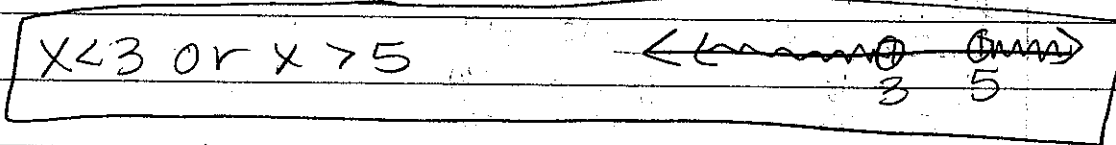
$$a < -2 \quad a > -4$$



$$2. |x-4| > 1$$

$$\begin{array}{l} x-4 > 1 \\ \underline{+4 \quad +4} \end{array} \quad \begin{array}{l} x-4 < -1 \\ \underline{+4 \quad +4} \end{array}$$

$$x > 5 \quad x < 3$$

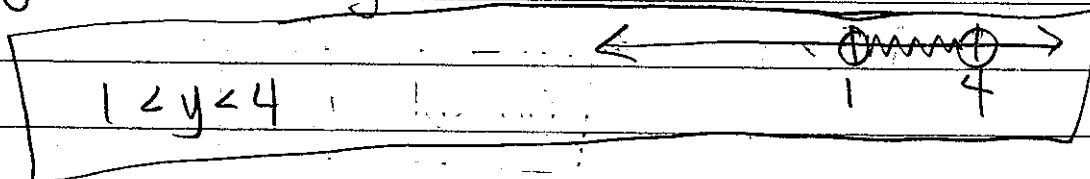


$$3. |2y-5| < 3$$

$$\begin{array}{l} 2y-5 < 3 \\ \underline{+5 \quad +5} \end{array} \quad \begin{array}{l} 2y-5 > -3 \\ \underline{+5 \quad +5} \end{array}$$

$$\frac{2y}{2} < \frac{8}{2} \quad \frac{2y}{2} > \frac{2}{2}$$

$$y < 4 \quad y > 1$$



$$4. \quad |7d| \geq -42$$

all Real numbers ; \mathbb{R}

$\leftarrow \text{-----} \rightarrow$

$$5. \quad |4x - 1| < 5$$

$$\begin{array}{r} 4x - 1 < 5 \\ \hline +1 \quad +1 \end{array}$$

$$\frac{4x}{4} < \frac{6}{4}$$

$$x < \frac{3}{2}$$

$$\begin{array}{r} 4x - 1 > -5 \\ \hline +1 \quad +1 \end{array}$$

$$\frac{4x}{4} > \frac{-4}{4}$$

$$x > -1$$

$$-1 < x < \frac{3}{2}$$

$\leftarrow \text{-----} \rightarrow$
-1 $\frac{3}{2}$

$$6. \quad |6a + 12| > 18$$

$$\begin{array}{r} 6a + 12 > 18 \\ \hline -12 \quad -12 \end{array}$$

$$\frac{6a}{6} > \frac{6}{6}$$

$$a > 1$$

$$\begin{array}{r} 6a + 12 < -18 \\ \hline -12 \quad -12 \end{array}$$

$$\frac{6a}{6} < \frac{-30}{6}$$

$$a < -5$$

$$a < -5 \text{ or } a > 1$$

$\leftarrow \text{-----} \rightarrow$
-5 1

$$7. \quad |2 + 2x| < 0$$

$$-12$$

$$-12$$

$$|2x| < -12$$

no solution

Assign 5
cont

Packet cont.

8. $|2x + 4| < 6$

$$\frac{2x + 4}{-4} < \frac{6}{-4}$$

$$\frac{2x + 4}{-4} > \frac{-6}{-4}$$

$$\frac{2x}{2} < \frac{2}{2}$$

$$\frac{2x}{2} > \frac{-10}{2}$$

$$x < 1$$

$$x > -5$$

