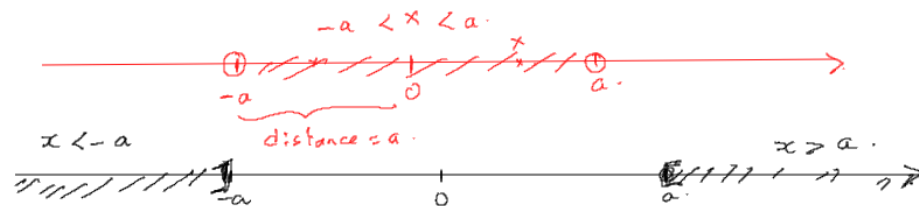


Inequation and absolute Value.

$a > 0$

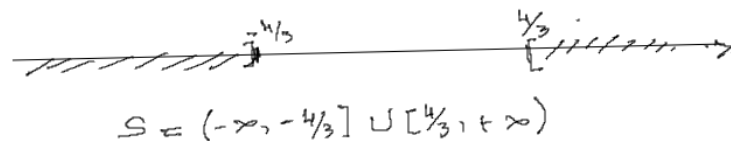
$$|x| < a \Leftrightarrow -a < x < a$$

$$|x| \geq a \Leftrightarrow x \leq -a \text{ or } x \geq a$$



• $|3x+4|+5 < 1 \Leftrightarrow |3x+4| < -4$ impossible. No solution. $S = \emptyset$

• $|-3x| \geq 4 \Leftrightarrow -3x \leq -4 \text{ or } -3x \geq 4$
 $\Leftrightarrow x \geq \frac{4}{3} \text{ or } x \leq -\frac{4}{3}$



• $11 - 6|3x-8| \geq 5$

$$\Leftrightarrow -6|3x-8| \geq 5-11$$

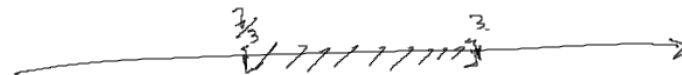
$$\Leftrightarrow |3x-8| \leq \frac{-6}{-6} = 1$$

$$\Leftrightarrow -1 \leq 3x-8 \leq 1$$

$$-1+8 \leq 3x-8+8 \leq 1+8$$

$$7 \leq 3x \leq 9$$

$$\frac{7}{3} \leq x \leq \frac{9}{3}$$



$$S = \left[\frac{7}{3}, 3 \right]$$