## Graph the Linear inequalities

$2x + 3 \le 7$	$-12 > \frac{x}{2} - 8$
$x \ge 7 \text{ or } x < -3$	$x > 3$ and $x \le 7$

## Notation:

ALGEBRAIC NOTATION	SET NOTATION	INTERVAL NOTATION	NUMBER LINE GRAPH
x = 5	{5}		<b>← →</b> 5
$x \neq -4$	$\{x x\neq -4\}$	$(-\infty, -4) \cup (-4, \infty)$	<b>←</b> -4
<i>x</i> > 7	$\{x x>7\}$	(7,∞)	<b>←</b>
$x \ge \frac{2}{3}$	$\left\{x \mid x \ge \frac{2}{3}\right\}$	$\left[\frac{2}{3},\infty\right)$	<del>2</del> 3
<i>x</i> ≤ −3	$\{x x \le -3\}$	(-∞, -3]	3
$1 < x \le 4$	$\{x   1 < x \le 4\}$	(1,4]	1 4

## Set Notation to Interval Notation

$\{x -7 \le x < 0\}$	$\{x   -6 < x \le -3\}$	$\{x x \le -4\}$