

Interval Notation and Linear Inequalities

Solve the inequality. Give your answer in interval notation and graph the solution set.

1 $3x + 11 \geq 6x + 8$ 	Interval Notation
	Graph

2 $-1 < 2x - 5 \text{ and } 2x - 5 \leq 3$ 	Interval Notation
	Graph

3 Write the following inequalities in interval notation and graph the solution set.

Inequality	Interval Notation	Graph
a $x < 2$		
b $-1 \leq x \leq 3$		
c $x < 1 \text{ or } x > 5$		
d $x \leq 1 \text{ or } x \geq 5$		

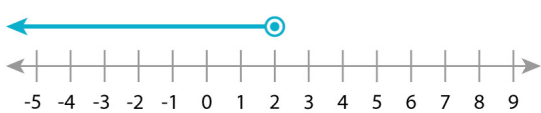
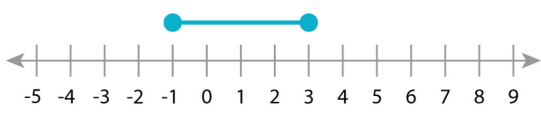
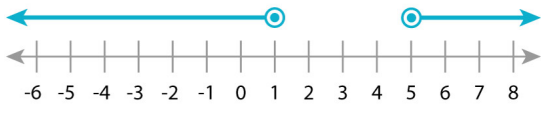
Interval Notation and Linear Inequalities

Answers.

1	$3x + 11 \geq 6x + 8$	Interval Notation $(-\infty, 1]$
	$x \leq 1$	Graph 

2	$-1 < 2x - 5 \text{ and } 2x - 5 \leq 3$	Interval Notation $(2, 4]$
	$2 < x \leq 4$	Graph 

3 Write the following inequalities in interval notation and graph the solution set.

Inequality	Interval Notation	Graph
a $x < 2$	$(-\infty, 2)$	
b $-1 \leq x \leq 3$	$[-1, 3]$	
c $x < 1 \text{ or } x > 5$	$(-\infty, 1) \cup (5, \infty)$	
d $x \leq 1 \text{ or } x \geq 5$	$(-\infty, 1] \cup [5, \infty)$	