



## Introducing Interval Notation

Answers:

	Inequality	Interval Notation	Graph
Ex.	$-3 \leq x < 5$	$[-3, 5)$	
Ex.	$x > 2$	$(2, \infty)$	
1.	$x \leq 3$	$(-\infty, 3]$	
2.	$x < 4$	$(-\infty, 4)$	
3.	$2 \leq x \leq 6$	$[2, 6]$	
4.	$x \geq 5$	$[5, \infty)$	
5.	$x \leq 1$	$(-\infty, 1]$	
6.	$x < 1$ or $x \geq 5$	$(-\infty, 1) \cup [5, \infty)$	
7.	$-5 < x < -1$	$(-5, -1)$	
8.	$x$ is any real #	$(-\infty, \infty)$	
9.	$x \leq -1$ or $x > 2$	$(-\infty, -1] \cup (2, \infty)$	
10.	$1 < x < 4$	$(1, 4)$	
11.	$x > 7$	$(7, \infty)$	
12.	$-2 \leq x \leq 2$	$[-2, 2]$	

13.  $f(x)$  is increasing on the interval  $(-\infty, 0]$  or  $x \leq 0$   
 $f(x)$  is positive on the interval  $(-2, 2)$  or  $-2 < x < 2$
14.  $f(x)$  is decreasing on the intervals  $(-\infty, -3]$  and  $[0, 3]$  or  $x \leq -3$  and  $0 \leq x \leq 3$   
 $f(x)$  is positive for all real numbers  $x$  or  $(-\infty, \infty)$
15.  $f(x)$  is constant on the intervals  $[0, 3]$  and  $[6, \infty)$  or  $0 \leq x \leq 3$  and  $x \geq 6$   
 $f(x)$  is negative on the intervals  $(-\infty, -2)$  and  $(4, \infty)$  or  $x < -2$  and  $x > 4$