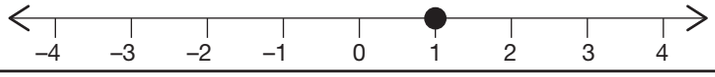
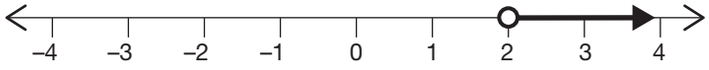
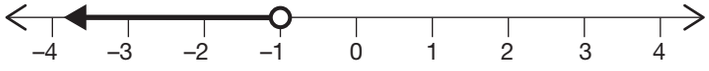
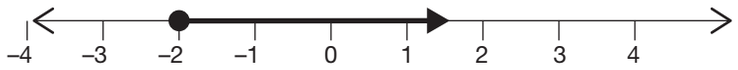
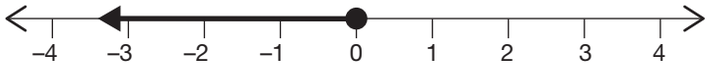
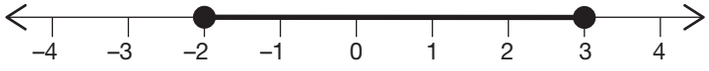
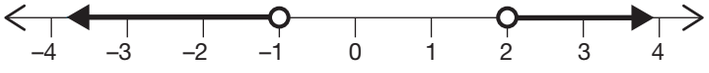
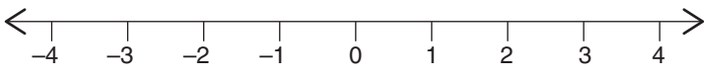
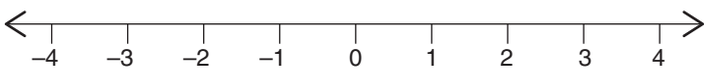
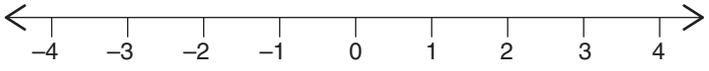
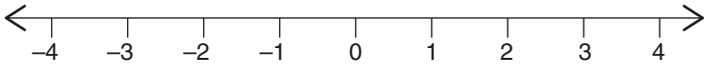
Words	Number line	Algebraic notation
x equals 1		$x = 1$
The y-values are greater than 2.		$y > 2$
The x-values are less than –1.		$x < -1$
The y-values are greater than or equal to –2.		$y \geq -2$
The x-values are less than or equal to 0.		$x \leq 0$
The y-values are greater than or equal to –2 and less than or equal to 3.		$-2 \leq y \leq 3$
The x-values are less than –1 and greater than 2.		$x < -1, x > 2$

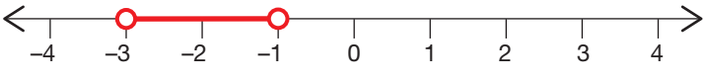
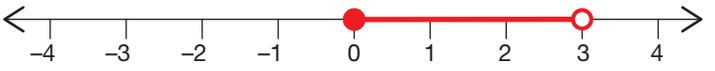
Check Up

Complete the following chart.

Words	Number line	Algebraic notation
The y-values are less than 4.		$y < 4$
		$x > -2$
		$-3 < x < -1$
		$0 \leq y < 3$

☑ Compare your answers.

Complete the following chart.

Words	Number line	Algebraic notation
The y-values are less than 4.		$y < 4$
The x-values are greater than –2.		$x > -2$
The x-values are greater than –3 and less than –1.		$-3 < x < -1$
The y-values are greater than or equal to 0 and less than 3.		$0 \leq y < 3$

Explore the Lesson

B. Domain and Range of Relations

The values by which a relation is defined are categorized into two groups – **domain** and **range**. The domain is the **set** of input values (the x-values) and the range is the set of output values (the y-values) that define a particular relation.

Domain
the set of all possible input values (x-values) of a relation

Range
the set of all possible output values (y-values) of a relation

Set
a collection of distinct objects, where each object is referred to as an element of the set