Set and Interval Notation

There are a ways that we can write sets.

1. Describing the set. {integers between and including 1 and 5}
2. Listing the set. {1, 2, 3, 4, 5}
3. Set Notation. {*x*: *x* ∈ *Z*, 1 ≤ *x* ≤ 5 }

which in words is: the set of *x* such that *x* is an element of the set of integers and *x* is greater than or equal to 1 and less than or equal to 5.

**Note:**

If the set of numbers is the real numbers the set is written. {*x*: *x* ≤ 2}

If individual numbers are excluded the symbol \ is used. {*x*: *x* ≤ 2}\{1}

1. Interval Notation. (2 , 10), [2, 10], (2, 10]

**Note:**

The brackets ( ) are used to indicate the end point is excluded.

The brackets [ ] are used to indicate the end point is included.

If the end point is -∞ or ∞ then ( or ) is place next to it. (-∞, 4] or (-2, ∞)

Examples.

 [-2, 4) or {*x*: -2 ≤ *x* < 4}



 (-3, ∞) or {*x*: *x* > -3}