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Handout: Order Symbols

$x \in [3, 5)$ means $x : x \geq 3$ and $x < 5$. Thus, x could equal 3, or 3.001, or 4.2, or 4.9999, but not 5.

$x \in \{3, 5\}$ means x is either 3 or 5, but not anything in between.

An open dot on a number line means that number is not included. A closed dot means that number *is* included.

An interval is a set of numbers in between two end point numbers. Thus, the interval $[3, 5]$ includes 3, 3.0000001, 3.23, 4.01, 4.5, 4.999, 5, and all the other numbers in between.

We say that $[3, 5]$ is a Closed Interval, because it includes its end points, 3 and 5.

We say that $(3, 5)$ is an Open Interval, because it doesn't included its end points, 3 and 5.