Creating Uniformly Spaced Vectors
(linspace function)

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In many applications we need to create a sequence of equally spaced values given the starting value, the ending value and the number of elements in the sequence.

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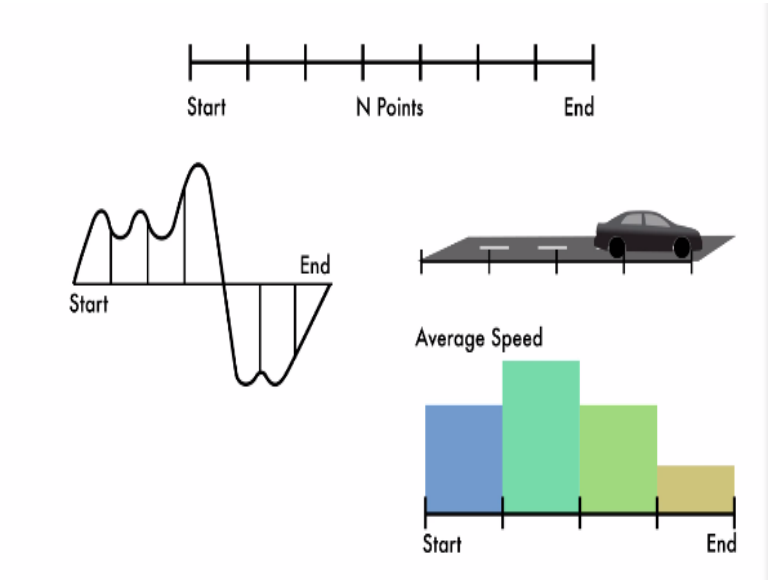

For example, the sequence may represent the boundaries of each subinterval over which a quantity is measured or we could use the sequence to represent discrete samples taken from a continuous signal.

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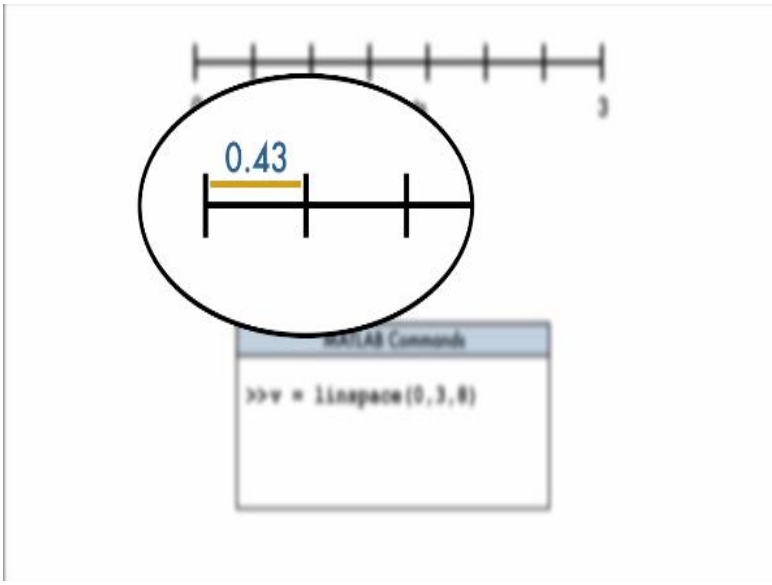

Suppose we want to create a sequence of eight values with starting and ending values of 0 and 3 respectively. In MATLAB this sequence is represented as a vector and we use the function LINSPACE to create that vector. The LINSPACE function requires three inputs the first two inputs are the starting and the ending values of the desired sequence, and the third input is the total number of elements in the sequence.

Note that the LINSPACE function automatically computes the spacing between adjacent elements of the sequence.

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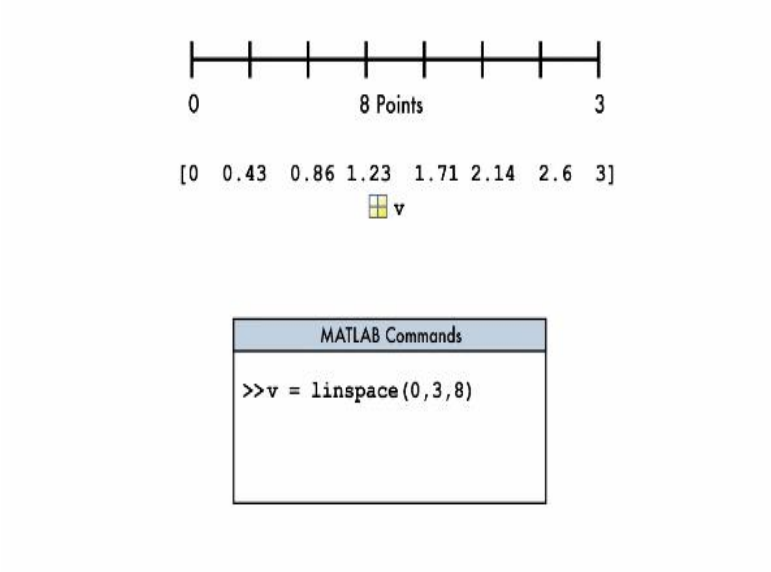

The output is a uniformly spaced vector of the specified length and includes both the starting and the ending values of the sequence as specified by the first two inputs of the LINSPACE function.

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