

Matlab

"%" represents the comments

";" prevents output from being displayed

Arithmetic Operators:

Addition: +

Subtraction: –

Multiplication: *

Division: /

Exponentiation: ^

Grouping: ()

Use plot(x,y)

and array $x=[10,3,5,7]$ $y=[5,3,2,4]$

to draw a graph(a line made up by points) with the given data

MATLAB Commands

```
>> x = [-2,-1,0,1,2]
```

```
x =
```

```
    -2    -1     0     1     2
```

```
>> xCol = [-2;-1;0;1;2]
```

```
xCol =
```

```
    -2
```

```
    -1
```

```
     0
```

```
     1
```

```
     2
```

While working on vectors

" , " are used to separate row values


" ; " are used to separate column values

$x = \text{startValue}:\text{spacing}:\text{endValue}$; — is used to represent a vector start with "startValue" and end with "endValue" spacing is the "spacing"

x = startValue:spacing:endValue;

MATLAB Commands

```
>> x = -2:0.15:2;
```

 **x** [-2, -1.85, -1.70, ..., 1.75, 1.90]

0.15 0.15 0.15

i

Vector begins with ***startValue***

Spacing is constant


Vector ends on last value within range

if spacing is "1" then the middle parameter can be omit

the following pic shows how to represent a column vector

MATLAB Commands

```
>> x = (-2:2) ' ;
```

 **x** $\begin{bmatrix} -2 \\ -1 \\ 0 \\ 1 \\ 2 \end{bmatrix}$ 5-by-1 column vector

Function `linspace()` can be used to get a few sample points from a sequence(range)

Equally Spaced Vectors Linspace AMRx

0

8 Points

3

[0 0.43 0.86 1.23 1.71 2.14 2.6 3]

 v

MATLAB Commands

```
>>v = linspace(0,3,8)
```

Matrices

 M

MATLAB Commands

```
>>M = [1, 2, 3; 4, 5, 6]
```

$\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{bmatrix}$