

<b>Date:</b>	<b>8 July 2020</b>	<b>Name:</b>	<b>Safiya Banu</b>
<b>Course:</b>	<b>MATLAB Onramp</b>	<b>USN:</b>	<b>4AL16EC061</b>
<b>Topic:</b>	<b>Calling function Obtaining help Plotting data</b>	<b>Semester &amp; Section:</b>	<b>8<sup>th</sup> sem “B”section</b>
<b>Github Repository:</b>	<b>Safiya-Courses</b>		

**Task 1**

The `size` function can be applied to an array to produce a single output variable containing the array size.

```
s = size(x)
```

**TASK**  
Create a variable named `dsize` containing the size of the `data` variable.

[Hint](#) | [See Solution](#) | [Reset](#) [Submit](#)

**Task 2**

**Task 3**

**Further Practice**

**Obtaining Multiple Outputs**

Instructions are in the task pane to the left. Complete and submit each task one at a time.

This code sets up the interaction.

```
1 load datafile
2 data
3 v1 = data(:,3);
4 v2 = data(:,4);
```

**Task 1**

`data = 7x4`

3.0000	0.5300	...
18.0000	1.7800	
19.0000	0.8600	
20.0000	1.6000	
21.0000	3.0000	
23.0000	6.1100	
38.0000	2.5400	

### Obtaining multiple outputs from functions calls

The `size` function can be applied to an array to produce a single output variable containing the array size.

```
s = size(x)
```

The `size` function can be applied to a matrix to produce either a single output variable or two output variables. Use square brackets (`[ ]`) to obtain more than one output.

```
[xrow,xcol] = size(x)
```

The maximum value of a vector and its corresponding index value can be determined using the `max` function. The first output from the `max` function is the maximum value of the input vector. When

called with two outputs, the second output is the index value.

```
[xMax,idx] = max(x)
```

## Obtaining help

The MATLAB documentation contains examples and information that can help you when working on your own problems.

## Plotting data

Two vectors of the same length can be plotted against each other using the `plot` function.

```
plot(x,y)
```

The screenshot displays the MATLAB Onramp interface. The top navigation bar includes '← MY COURSES', 'MATLAB Onramp [55% complete]', and the user name 'SAFIYA BANU'. The main content area is titled '9.1 Plotting Vectors' and contains 'Task 1'. The task description states: 'Two vectors of the same length can be plotted against each other using the `plot` function.' Below this, the code `plot(x,y)` is shown. A 'TASK' box instructs the user to 'Create a plot with `sample` on the x-axis and `mass1` on the y-axis.' To the right of the task description is a 'WORKSPACE' panel showing a plot of `sample` vs `mass1`. The plot shows a blue line with markers, peaking at approximately (25, 50). Below the task description are buttons for 'Hint', 'See Solution', 'Reset', 'Submit', and 'Next task'. The 'Test Results' section shows 'Correct!' and two green checkmarks indicating that 'sample' is on the x-axis and 'mass1' is on the y-axis. The 'COMMAND WINDOW' at the bottom shows the following code:

```
1 load datafile
2 sample = data(:,1);
3 density = data(:,2);
4 v1 = data(:,3);
5 v2 = data(:,4);
6 mass1 = density.*v1;
7 mass2 = density.*v2;
```

The 'TASK 1' section shows the code `plot(sample,mass1)` being entered into the command window. The 'TASK 2' section is currently empty.

← MY COURSES

MATLAB Onramp (61% complete)

SAFIYA BANU

10.1 Project - Electricity Usage

← PREVIOUS

NEXT →

MATLAB Onramp

61% complete

✓ ▶ 1. Course Overview 100%

✓ ▶ 2. Commands 100%

✓ ▶ 3. MATLAB Desktop and Editor 100%

✓ ▶ 4. Vectors and Matrices 100%

✓ ▶ 5. Indexing into and Modifying Arrays 100%

✓ ▶ 6. Array Calculations 100%

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✓ ▶ 9. Plotting Data 100%

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▶ Project - Electricity Usage

▶ Project - Audio Frequency

▶ 11. Importing Data 0%

▶ 12. Logical Arrays 0%

▶ 13. Programming 0%

LIVE EDITOR

VIEW

Task

Code

Control

Refactor

CODE

Section Break

SECTION

Run

Step

Stop

RUN

plot.mlx x +

Electricity Usage

Instructions are in the task pane to the

Complete and submit each task

at a time.

Task 1

Task 2

WORKSPACE