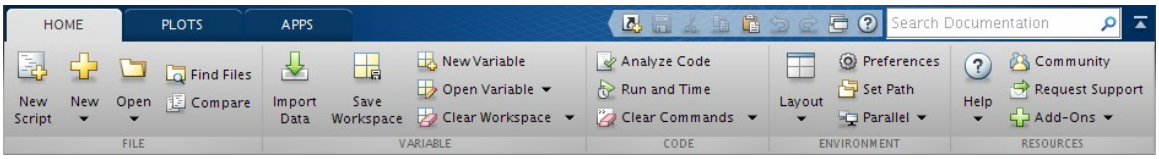
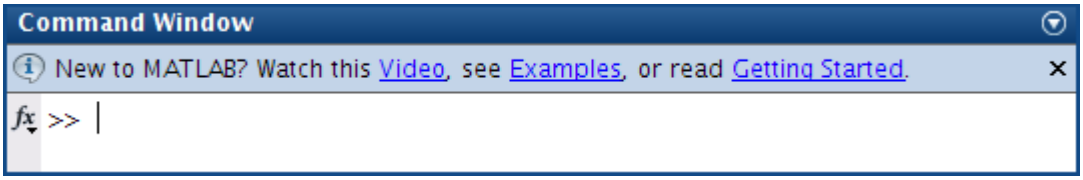
Lab 01

Getting Started

1. Start MATLAB
2. On the HOME tab, in the ENVIRONMENT section, click Layout, then Default.[1]



3. Consider the Command Window.



Arithmetic

4. In the Command Window, type the following commands and write down the output:

```
≫ 2+3 ↵
   ans =

        5

≫ 2*3 ↵

   ----
≫ 2/3 ↵

   ----
≫ 2^3 ↵

   ----
```

5. Write the intended operation of the following operators:

```
+      Addition
-      ----------.
*      ----------.
/      ----------.
\      ----------.
^      ----------.
```

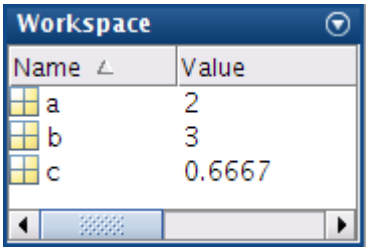
1 You may like to try other Layout options.

Variables

6. In the Command Window, type the following commands and write down the output:

```
>> a=2 ↵
   a =


        2
   ----
>> b=3 ↵

   ----
>> c=a/b ↵

   ----
```

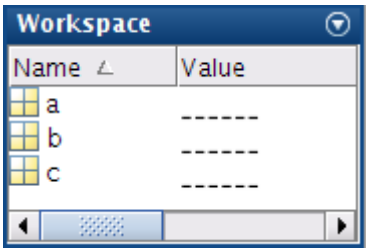
7. Consider the Workspace.



8. In the Command Window, type the following commands:

```
>> a=4; ↵
>> b=5; ↵
```

9. From the Workspace, write the values of the variables a, b, and c.



10. In the Command Window, type the following commands and write down the output:

```
>> a=4;b=5; ↵
>> a=4,b=5, ↵

   ----

   ----
```

11. Notice that both (,) and (;) can be used to separate commands, but (;) suppresses the output.

12. In the Command Window, type the following commands, write down the output, and monitor the Workspace:

```
>> clc ↵
>> clear ↵
>> a=4; ↵
>> whos ↵

  ---------------------------------

>> b=5; ↵
>> whos ↵

  ---------------------------------

>> clear a ↵
>> whos ↵

  ---------------------------------

>> help clc ↵

  ---------------------------------

  ---------------------------------
```

13. Write the purpose of using the following functions:

```
clc     ___to clear command window.___
clear   ---------------------------------
whos    ---------------------------------
help    ---------------------------------
```

Mathematical Functions

14. In the Command Window, type the following commands and write down the output:

```
>> sin(pi/2); ↵

  ----

>> tan(0); ↵

  ----
```

15. Write the purpose of the following functions:

```
sin     ___to calculate sine of argument in radians___
cos     ----------------------------------------
tan     ----------------------------------------
sqrt    ----------------------------------------
```

Vectors

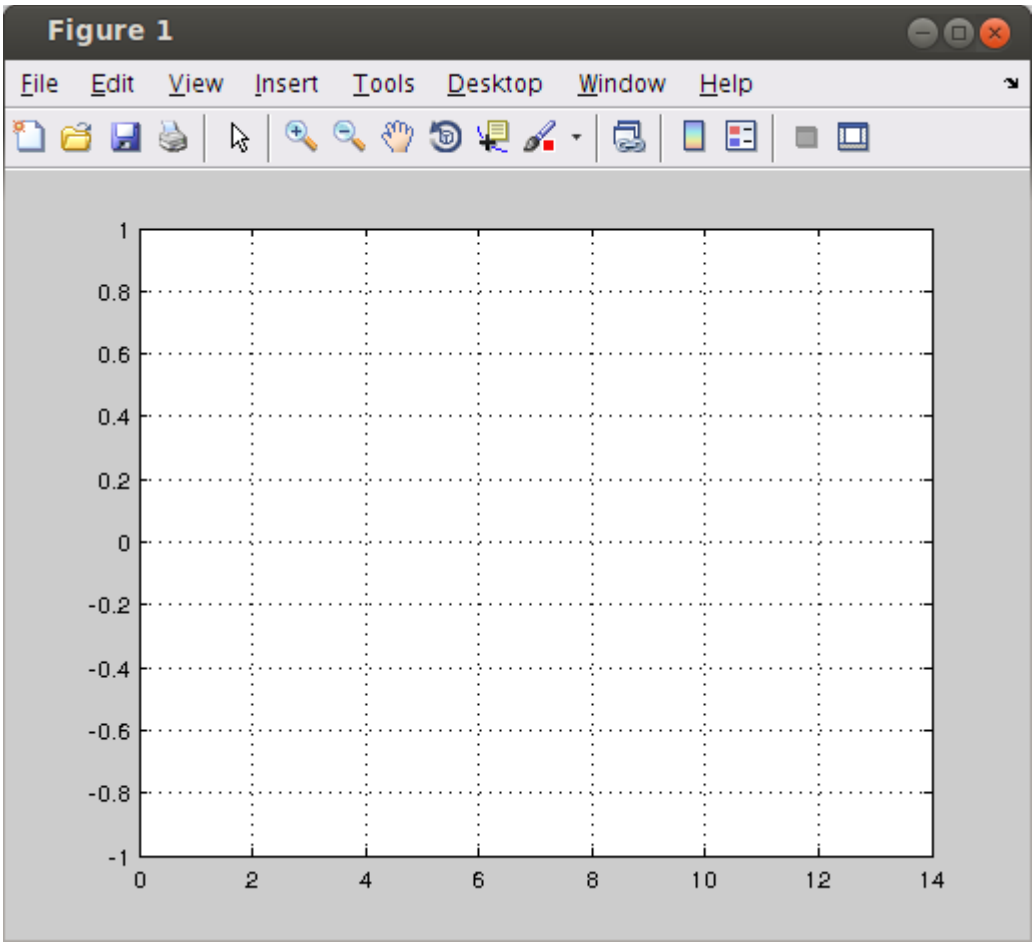
16. In the Command Window, type the following commands and write down the output:

```
≫ a=0:10 ↵

   ------------------------------------------

≫ b=0:2:20 ↵

   ------------------------------------------

≫ c=a+b ↵

   ------------------------------------------
```

Plot

17. In the Command Window, type the following commands and write draw the output:

```
≫ x=0:0.1:4*pi; ↵
≫ y=sin(x); ↵
≫ plot(x,y,'-+r'),grid ↵
```



18. Try different plot styles.