



Benha University

Computer Systems Engineering Electrical Engineering Department Faculty of Engineering (at Shoubra)

Lab 01

Getting Started

- 1. Start MATLAB
- 2. On the HOME tab, in the ENVIRONMENT section, click 🗔 Layout, then 🔲 Default.¹

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Command Window	\odot
(1) New to MATLAB? Watch this Video, see Examples, or read Getting Started.	×
$f_{x} >> $	

Arithmetic

3.

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



5. Write the intended operation of the following operators:

1 You may like to try other Layout options.





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Variables

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

```
>> a=2 ↔
a =
__<u>?</u>__
>> b=3 ↔
_____
>> c=a/b ↔
```

7. Consider the Workspace

Workspace	\odot
Name 🛆	Value
🕂 a	2
🕂 b	3
H c	0.6667
100000	
 399993 	•

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.

Workspace	$\overline{\mathbf{O}}$
Name ∠	Value
🕂 a	
🛨 b	
<u>н</u> с	
4 33333	•

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

```
≫ a=4;b=5; ب
≫ a=4,b=5, ب
----
```

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





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

≫	clc 4
≫	clear 🗸
≫	a=4; 4
≫	whos 🗸
≫	b=5; ↔
≫	whos 🗸
≫	 clear a ب
≫ ≫	 clear a ب whos ب
» »	clear a ຝ whos ຝ
≫ ≫	 clear a ب whos ب help clc ب
» » »	clear a ب whos ب
* * *	clear a ب whos ب help clc ب

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 <u>to calculate sine of argument in radians</u>
cos
tan
sqrt





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Vectors

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



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 ↓

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	0		2	4	0	0	10	12	14

18. Try different plot styles.