

Name(s) \_\_\_\_\_

# Lab 1 Responses

## Getting Started with JES

### Instructions

You should use this sheet in conjunction with the lab instructions sheet. the lab. As you work through the lab you will see questions that you are to answer. These are normally marked with square brackets such as [Q1]. Whenever you see one of those questions in the instructions you should switch to this sheet and write down the answers on this sheet.

Turn in this sheet by the end of class.

### Responses

[Q1] What happened after you pressed the Enter key? (Be very specific)

[Q2] What happens after you press the Enter key? (Be very specific)

[Q3] Enter each of the following mathematical statements at the command prompt and press enter. Record what "result" the computer returns in response to your command

Arithmetic Expression	Results via the command prompt
print 15 + 3	
print 15 - 3	
print 15 * 3	
print 15 / 3	

[Q4] Enter each of the following mathematical statements at the command prompt and press enter. Record what "result" the computer returns in response to your command

Arithmetic Expression	Results via the command prompt
print 15 / 3	
print 16 / 3	
print 17 / 3	
print 18 / 3	
print 19 / 3	

[Q5] Enter each of the following mathematical statements at the command area and press enter. Record what "action" the computer takes in response to your command

Arithmetic Expression	Results via the command prompt	Arithmetic Expression	Results via the command prompt
8 / 4		8 % 4	
9 / 4		9 % 4	
10 / 4		10 % 4	
11 / 4		11 % 4	
12 / 4		12 % 4	
13 / 4		13 % 4	

[Q6] Given what you observed in the previous step, write a short explanation of what the % operator does in Python.

[Q7] Enter each of the following mathematical statements at the command area and press enter. Record what "action" the computer takes in response to your command

Arithmetic Expression	Results via the command prompt
8 % 2	
9 % 2	
10 % 2	
11 % 2	
12 % 2	

[Q8] What do you notice about even numbers? What do you notice about odd numbers?

[Q9] Enter each of the following mathematical statements at the command area and press enter. Record what "action" the computer takes in response to your command

Arithmetic Expression	Results via the command prompt
12345 / 10	
12345 % 10	
12345 / 100	
12345 % 100	
12345 / 1000	
12345 % 1000	

[Q10] Enter each of the following mathematical statements at the command area and press enter. Record what "action" the computer takes in response to your command

Arithmetic Expression	Results via the command prompt
12345 % 10	
12345 / 10 % 10	
12345 / 100 % 10	
12345 / 1000 % 10	
12345 / 10000	

[Q11] Enter each of the following mathematical statements at the command prompt and press enter. Record what "result" the computer returns in response to your command

Arithmetic Expression	Results via the command prompt
print 15.0 + 3.0	
print 15.0 - 3.0	
print 15.0 * 3.0	
print 15.0 / 3.0	

[Q12] Enter each of the following mathematical statements at the command prompt and press enter. Record what "result" the computer returns in response to your command

Arithmetic Expression	Results via the command prompt
print 16.0 / 3.0	
print 16 / 3.0	
print 16.0 / 3	
print 16 / 3	

[Q13] Enter each of the following mathematical statements at the command area and press enter. Record what "action" the computer takes in response to your command

Arithmetic Expression	Results via the command prompt
2 ** 1	
2 ** 2	
2 ** 3	
2 ** 4	
3 ** 1	
3 ** 2	
3 ** 3	
3 ** 4	

[Q14] Given what you observed in the previous step, write a short explanation of how the `**` operator works in Python.

[Q15] Given this knowledge, **predict** what will happen when you invoke the following statements. **After** making your prediction, enter the statement at the interactions prompt and check if you were correct. If you were incorrect, determine why.

Arithmetic Expression	Predicted Results	Actual Results
<code>4 * 3 + 2 * 9 / 3</code>		
<code>4 * 3 + 2 * (9 / 3)</code>		
<code>4 * (3 + 2) * 9 / 3</code>		
<code>20 / 4 * 6 / 2</code>		
<code>(20 / 4) * 6 / 2</code>		
<code>20 / 4 * (6 / 2)</code>		
<code>20 / (4 * 6) / 2</code>		
<code>(2 - 3 + (2 * (12/4) + 1))</code>		
<code>5 - (2 + 5) * 10/3</code>		
<code>4 + 2**5 - 3</code>		
<code>4 + 2**(5 - 3)</code>		
<code>5 / 3 - 9 % 4</code>		
<code>12 / 4 * -3 + -1</code>		

[Q16] Enter the following statements into the interactions pane and observe what happens (note, one of these will cause an error).

Print Expression	Results via the command prompt
<code>print "Media Computation"</code>	
<code>print "Media" + "Computation"</code>	
<code>print "Media" + " " + "Computation"</code>	
<code>print 5+3</code>	
<code>print "5 + 3"</code>	
<code>print "5" + "3"</code>	
<code>print "5 + 3 =" + 5+3</code>	
<code>print "5 + 3 =" + str(5+3)</code>	

[Q17] What happens when you join two strings together using the plus sign?

[Q18] What happens when you join a string and a number together using the plus sign?

[Q19] What do you guess the computer is doing when you use `str(5+3)`?