Lana Pinjic

Dr. Thaer W. Jayyousi

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Assignment 1

1. (6 points) Write Python statement for each of the following questions
   1. Find the product of the numbers 8, 9, and 10.

**8\*9\*10**

* 1. Find the average age of five people around you using integer division.

**(10+11+12+13+14)//5**

* 1. Compute 3 to the 110th power.

**3\*\*110**

* 1. Compute the factorial of 13.

**(math.factorial(13))**

* 1. Find the volume of a sphere with a radius of 1 using the formula 4/3πr3.

**Volume = 4.0/3.0\*math.pi\*1\*\*3**

* 1. Compute 1/3 of 15?

**15\*1/3**

1. (6 points) Answer each of the following questions
   1. a) Which of the following are legal variable names:

(a) \_abc123

No – starts with underscore.

(b) 123abc

No – starts with a digit.

(c) abc123\_

No – ends with underscore.

(d) \_123

No - starts with underscore.

**None are legal variable names.**

* 1. b) Consider the following statements:

idx = 0

idx = idx + 1

idx = idx + 2

What is the value of idx after Python evaluates these three statements?

**3**

* 1. c) What would the following display?

num = 99

num = 5

print(num)

**5**

* 1. If you execute these three lines of code, what will be printed?

my\_var1 = 7

my\_var2 = 5

print(my\_var1 % my\_var2)

**2**

* 1. What will be printed by the following:

x = 4

y = 5

print(x//y)

**0**

* 1. Given the expression 30 - 3 \*\* 2 + 8 // 3 \*\* 2 \* 10, what is the output of the expression? Based on precedence and associativity of the operators in Python, correctly parenthesize the expression such that you get the same output as above.

**Output: 21**

**(30 - (3 \*\* 2)) + 8 // ((3 \*\* 2) \* 10)**