**Topic: user-defined functions**

**CS 150 Introduction To CS**

**Python - Worksheet 03**

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Give the output of the following programs:

1.

def doublingTime(x):

time = 72 / x

return time

def main():

p = float(input("Enter the population growth as a percent: "))

print("The population will double ", end='')

print("in about {0:.2f} years.".format(doublingTime(p)))

main()

Show output in the box below (assume user enters 2)

**Enter the population growth as a percent: 2**

**The population will double in about 36.00 years.**

2.

def sentence(num, thing, where):

print(num, thing + "s in", where)

def main():

sentence(168, "hour", "a week")

sentence(76, "trombone", "the big parade")

main()

SShow output in the box below

**168 hours in a week**

**76 trombones in the big parade**

3.

name = "Fred"

def getName():

name = "rick"

return name

def main():

global name

otherName = getName()

name += otherName

print(name)

main()

SShow output in the box below

**Fredrick**

4. In Wing, write a pay-raise program that requests a person’ first name, last name, and current annual salary, and then displays the person’s salary for next year assuming they will get a 5% raise. Use functions for input, output, and a function to calculate the new salary. The program should work for any input values. Do not use any global variables. For example, you may have the following functions: (Hint: …. means you will need parameters)

* getFirstName()
* getLastName()
* getCurrentSalary()
* calculateNewSalary(….)
* displayResults(….)
* main()

Sample Run (user input shown in bold) – format exactly like this output

Enter first name: **John**

Enter last name: **Doe**

Enter current salary: **48000**

New salary for John Doe: $50,400.00

**Python File!**