HW 1 (10 pts)

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Write your solution after the question. Show your work (i.e., the relevant python code). An example question has already been filled out for you. **Submit this file to Moodle.**

1. [0 pt] Compute the sum of 8, 9, and 10.

>>> 8 + 9 + 10

27

1. [1/2 pt] Compute the number of seconds in 2 years.

>>> 2\*365\*24\*60\*60

63072000

1. [1/2 pt] Compute the number of inches in 3 miles.

>>> 63360\*3

190080

1. [1 pt] Compute the number of 3 ft square tiles to cover the floor of a 12 by 12 ft room.

>>> (12\*12)/3

48.0

1. [1 pt] Compute the number of handshakes required for each person in a class of 17 to shake hands with all other classmates.

>>> (17\*16\*15\*14\*13\*12\*11\*10\*9\*8\*7\*6\*5\*4\*3\*2\*1)/17

20922789888000.0

1. [1/2 pt] Compute 1/3 of 36.

>>> 1/3\*36

12.0

1. [1 pt] The Andromeda galaxy is 2.9 million light years away. There are miles per light year. How many miles away is the Andromeda galaxy?

'

>>> (2.9\*10\*\*6)\*(5.879\*10\*\*12)

1.70491e+19

1. [1 pt] How many years would it take to travel to the Andromeda galaxy at 35 miles per hour?

>>> ((1.70491e+19)/35)/8760

55606979778212.66

1. [1 pt] Compute the factorial of 9.

>>> 9\*8\*7\*6\*5\*4\*3\*2\*1

362880

1. [1/2 pt] Which of the following are legal variable names? Write your answer below.

abc123\_ (legal variable name)

123abc\_ (not legal variable name)

\_abcd123 (legal variable name)

\_123 (legal variable name)

1. [1 pt] After all lines are evaluated, what are the values of a, b, c, and d? Label each variable name with its value.

A picture containing shape

Description automatically generated

a=20

b=5

c=100

d=15

1. [1 pt] What are the values of a and b after Python evaluates each of the following four statements?

A picture containing icon

Description automatically generated

20

52

1. [1 pt] What is the value of idx after Python evaluates all of the following statements?

Text

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Idx=9

Bonus Question:

If it costs 16.75 dollars/hour to rent an exotic animal (say an African Parrot) how much is that per year in Pounds Sterling? Show the dimensional analysis work.

>>> 16.75\*24\*365

146730.0 dollars per year

=125666.91 Pounds Sterling