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

17

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

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

31536000

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

>>> 12 \* 5280 \* 1

63360

1. [1 pt] Compute the number of 3 ft square tiles to cover the floor of a 9 by 12 ft room.

>>> 9 \* 12 / 3

36.0

1. [1 pt] Compute the number of handshakes required for each person in a class of 19 to shake hands with all other classmates.

>>> 1 \*2 \* 3 \* 4 \* 5 \* 6 \* 7 \* 8 \* 9 \* 10 \* 11 \* 12 \* 13 \*14 \* 15 \* 16 \* 17 \* 18

6402373705728000

1. [1/2 pt] Compute 1/3 of 45.

>>> 45/3

15.0

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 \* 5.897 \* 10 \*\* 12

1.71013e+19

1. [1 pt] How many years would it take to travel to the Andromeda galaxy at 65 miles per hour? (WORNG?)

>>> 1.71013e+19/65\*24\*365

2.3047290461538458e+21

1. [1 pt] Compute the factorial of 11.

>>> n = 11

>>> fact = 1

>>> for i in range(1,n+1):

fact= fact\*i

>>> print("The factorial of 11 is ;", end="")

The factorial of 11 is ;

>>> print(fact)

39916800

1. [1/2 pt] Which of the following are legal variable names?
   1. \_abcd123
   2. 123abc\_
   3. abc123\_
   4. \_123

c) abc123\_

1. [1 pt] Draw a reference diagram to show the labels and objects after evaluating all statements.

A picture containing clock

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|  |  |
| --- | --- |
| Name Space | Object Space |
| a | 10 |
| b | 20 |
| c | 200 |
| d | 30 |

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

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a = 30

b = 42

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

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Idx = 6