**Problem 1**

Midterm due Mar 2, 2021 15:30 PST

Completed

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Problem 1-1

0.0/1.0 point (graded)

Suppose x = "pi" and y = "pie". The line of code x, y = y, x will swap the values of x and y, resulting in x = "pie" and y = "pi".

True

False

incorrect

Submit

You have used 1 of 1 attemptSome problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

Problem 1-2

1.0/1.0 point (graded)

Suppose x is an integer in the following code:

def f(x):

while x > 3:

f(x+1)

For any value of x, all calls to f are guaranteed to never terminate.

True

False

correct

Submit

You have used 1 of 1 attemptSome problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

Problem 1-3

1.0/1.0 point (graded)

A Python program always executes every line of code written at least once.

True

False

correct

Submit

You have used 1 of 1 attemptSome problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

Problem 1-4

Suppose you have two different functions that each assign a variable called x. Modifying x in one function means you always modify x in the other function for any x.

False

Problem 1-5

The following code will enter an infinite loop for all values of i and j.

while i >= 0:

while j >= 0:

print(i, j)

False

Problem 1-6

It is always possible and feasible for a programmer to come up with test cases that run through every possible path in a program.

False

Problem 1-7

Assume f() is defined. In the statement a = f(), a is always a function.

False

Problem 1-8

A program that keeps running and does not stop is an example of a syntax error.

False

Problem 1-9

Consider the following function.

def f(x):

a = []

while x > 0:

a.append(x)

f(x-1)

A new object of type list is created for each recursive invocation of f.

True

Problem 1-10

A tuple can contain a list as an element.

True

False