Quiz 3

Instructions

1. Answer all questions.
2. Since this is a practice quiz, it's an exercise, so you **may** work on it together.
3. However, I'd **recommend** you complete it yourself under test-like conditions, without accessing any external resources (the course website, a Python interpreter, etc.) until after you've finished.

Functions

Syntax error Show Correct Answer Show Responses

Click on the syntax error in the following Python code.

```
def Σ(values):
    return sum(values) / len(values)

def moving_average(values=[], length):
    avg = []

    for i in range(len(values)-length):
        avg += values[i:i+length]

    return avg
```

Function evaluation

VERSION A | VERSION B | VERSION C | VERSION D

Given the following definition:

```
def foo(x, y=10, z=20):
    return x + y * z
```

What will the expression `foo(1, z=2)` evaluate to?

Function evaluation 2

VERSION A | VERSION B | VERSION C | VERSION D | VERSION E | VERSION F | VERSION G

Given the following definition, what will the expression `bar(6)` evaluate to?

```
def bar(n):
    if n < 6:
        return n

    return bar(7 * n % 5)
```

Testing

Acceptable error rates

Show Correct Answer Show Responses

What is an acceptable error rate for a function that computes an arithmetic result?

A	The function computes the wrong result one time in a thousand
B	The function computes the wrong result one time in a million
C	The function computes the wrong result one time in a billion
D	No error rate is acceptable

Testing statements

VERSION A | VERSION B

Choose the correct statement about testing.

A	Testing proves that code works
B	Incorrect code can pass tests
C	For most (but not all) algorithms, we can test every possible input/output pair
D	Tests have to be described in the same language as the code being tested

Test quality

Show Correct Answer Show Responses

You are tasked with writing tests for a Python function that determines whether or not an integer is prime. Which of the following is the best set of input values to test with?

A	2, 4, 8, 16
B	10, 20, 100, 1000
C	5, 12, 17, 20
D	3, 5, 7, 11, 13, 17, 19, 23
E	All integers from 1 through $2^{32} - 1$

Ranges, lists and iteration

Range usage

VERSION A | VERSION B | VERSION C | VERSION D | VERSION E | VERSION F

After the following code executes, what will the value of `i` be?

```
for i in range(3, 12, 5):
    print(2*i)
```

Syntax error

Show Correct Answer | Show Responses

Click on the syntax error in the following code.

```
a = []

b = [10 20 30]

c = [1, 2, 3]+[4, 5, 6]

d = [i%3 for i in range(20)]
```

Slicing 1

VERSION A | VERSION B | VERSION C | VERSION D | VERSION E | VERSION F

What does the expression `[1, 2, 3, 4, 5][1:][1]` evaluate to?

Slicing 2

VERSION A | VERSION B | VERSION C | VERSION D

What string does the expression `'dechloridizers'[2::3]` evaluate to?