Python Quiz 3 Week 4

Please complete this quiz. Have fun!

Points: 9/17

1. What is NumPy? *
(2/2 Points)

- [ ] It is a programming language in Python
- [x] It is a package for scientific computing in Python ✓
- [x] It is a library for Python, supporting multi-dimensional arrays and matrices ✓
- [ ] It is a library containing built in source code for mathematical matrices

2. Choose the correct statement.

NumPy arrays have a fixed size at creation, unlike Python lists, which can grow dynamically. *
(1/1 Points)

- (•) True ✓
- ( ) False

3. What is the output of the code below:

You may use Jupyter/Pycharm, VS Code.

```
import numpy as np
l = [1, 2, 3, 4]
print("Original List:",l) *
```

(1/1 Points)

Original List: [1, 2, 3, 4] ✓

4. Complete the code below and enter your answer in the block:

You may use Jupyter/Pycharm, VS Code.

```
import_____ as ___
a = ___array(1)
_____("One-dimensional numpy array: ",a) *
```

(0/4 Points)

>>> import numpy as np >>> a = np.array(1) >>> print("One-dimensional numpy array:",a) One

Correct answers: import numpy as np a = np.array(1) print("One-dimensional numpy array: ",a)

5. Choose the correct ndarray attributes *

(3/3 Points)

- [ ] ndarray.dim
- [x] ndarray.shape ✓
- [x] ndarray.size ✓
- [x] ndarray.dtype ✓

6. What is the output of the code below? Enter your answer in the block

You may use Jupyter/Pycharm, VS Code.

```
def quicksort(arr):
    if len(arr) <= 1:
        return arr
    pivot = arr[len(arr) // 2]
    left = [x for x in arr if x < pivot]
    middle = [x for x in arr if x == pivot]
    right = [x for x in arr if x > pivot]
    return quicksort(left) + middle + quicksort(right)

print(quicksort([3,6,8,10,1,2,1])) *
```

(0/2 Points)

```
[[3, 6, 8, 1, 2, 1], 10]
```

Correct answers: [1, 1, 2, 3, 6, 8, 10]

7. Complete the Linear Algebra equation below and enter your code in the answer block:

You may use Jupyter/Pycharm, VS Code.

```
import numpy as ___
M = np.array([[1,2],[3,6],[9,12]])
print___ *
```

(0/1 Points)

```
[[ 1  2]  [ 3  6]  [ 9 12]]
```

Correct answers: import numpy as np M = np.array([[1,2],[3,6],[9,12]]) print(M)

8. Choose the correct statement: (Dot) from the NumPy library is used to calculate the product of two arrays. *
(1/1 Points)

- (●) True ✓
- ( ) False
- ( ) Maybe

9. Choose the correct statement: Multi_dot is used to compute the dot product of two or more arrays in a single function call, while automatically selecting the fastest evaluation order. *
(1/1 Points)

- (●) True ✓
- ( ) False
- ( ) Maybe

✗

10. Choose the correct statement: Is the number 0 True or False? *
(0/1 Points)

- ( ) True
- ( ) False ✓
- (●) Neither negative or positive

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