Week 3 Quiz

Multiple Choice

1/1 point (graded)

When working with cells in Jupyter, what does "_" refer to?

- ◉ The output of the last cell executed. ✔
- ○ A space in the line of code.
- ○ A string character.

Answer

Correct: Video: "Jupyter: Getting Started"

Submit

ℹ Answers are displayed within the problem

True or False

1/1 point (graded)

Code in the Jupyter code cells are restricted to being one line.

- ○ True
- ◉ False ✔

Answer
Correct: Video: "Jupyter: Getting Started"

Submit

Answers are displayed within the problem

Multiple Choice

1/1 point (graded)
Using markdown cells in Jupyter, how do you format text as bold?

- **word** ✔
- *word*
- ##word##
- #word#

Answer
Correct: Video: "Documenting Analysis with Markdown Text"

Submit

Answers are displayed within the problem

Checkboxes

1/1 point (graded)
What are the 3 reasons that data scientists working in Python use numpy all the time?

- [x] Its speed. ✔

- [x] Its functionality. ✔
- [x] Many packages rely on numpy. ✔
- [ ] It enables text markup cells.

✔

Answer
Correct:
Video: "Why Numpy"
Video: "Why Numpy"
Video: "Why Numpy"
Video: "Why Numpy"

Submit

Answers are displayed within the problem

True or False

1/1 point (graded)
Elements in numpy arrays must be all the same type.

- (•) True ✔
- ( ) False

Answer
Correct: Video: "Why Numpy"

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Answers are displayed within the problem

True or False

1/1 point (graded)
ndarrays are mutable.

- (•) True ✔
- ( ) False

Answer
Correct: Video: "Numpy: ndarrays Basics"

Submit

Answers are displayed within the problem

Multiple Choice

1/1 point (graded)
Look at the following code:

```
b = np.array([1,2,3])
b[1] = 'one'
```

What error prints out after you run these two lines of code?

- ( ) SyntaxError
- ( ) NameError
- ( ) KeyError
- (•) ValueError ✔

Answer
Correct: Video: "Numpy: ndarrays Basics"

Submit

Answers are displayed within the problem

Multiple Choice

1/1 point (graded)

How do you create an Rank 1 array with numpy using the numbers 1, 2, 3?

- np.ndarray([1,2,3])
- np.array([1,2,3]) ✔
- np.array(1,2,3)
- np.ndarray(1,2,3)
- np.ndarray([[1,2,3],[3,2,1])
- np.array([[1,2,3],[3,2,1])

Answer

Correct: Video: "Numpy: ndarrays Basics"

Submit

Answers are displayed within the problem

Multiple Choice

1/1 point (graded)

There is a syntax error in the code below.

```
np.array( [11,12,13],[21,22,23] )
```

How would you fix it to create the intended 2x3 array?

- `np.array( [[11,12,13],[21,22,23]] )` ✔
- `np.array( [11,12,13,21,22,23] )`
- `np.array( [11,12,13],[21,22,23] )`
- `np.array[ [11,12,13,21,22,23] ]`

Answer
Correct: Video: "Numpy: ndarrays Basics"

Submit

Answers are displayed within the problem

Multiple Choice

1/1 point (graded)
How would you change the number 5 to 7 in this matrix?

```
arr = np.array([1,2,3,4,5])
```

- arr[0,5] = 7
- arr[4] = 7 ✔
- arr[5] = 7
- arr[0,4] = 7

Answer
Correct: Video: "Numpy: ndarrays Basics"

Submit

Answers are displayed within the problem

Checkboxes

1/1 point (graded)
Given the code below:

```
arr = np.array([[1,2,3,4],[5,6,7,8],[9,10,11,12]])
```

Which of the following two commands below produce the same result?

- [x] arr[0:1,1:3] ✔
- [ ] arr[2,1:3]
- [ ] arr[1,1:3]
- [x] arr[:1,1:3] ✔

✔

Answer
Correct:
Video: "Numpy: ndarray Indexing"
Video: "Numpy: ndarray Indexing"
Video: "Numpy: ndarray Indexing"
Video: "Numpy: ndarray Indexing"

Submit

Answers are displayed within the problem

Multiple Choice

1/1 point (graded)

If you try to access rows of a 3-by-3 numpy array called “arr” using the command:

```
arr[:2,]
```

How many rows will be returned?

- (•) 2 ✔
- ( ) 3
- ( ) IndexError: index out of bounds

Answer
Correct: Video: "Numpy: ndarrays Indexing"

Submit

Answers are displayed within the problem

Multiple Choice

1/1 point (graded)
You are given the following lines of code:

```
arr = np.array([[1,2,3],[4,5,6],[7,8,9]])
slice = arr[:2,1:3]
slice[0,0]
```

What is the result of “slice[0,0]” in your last line of code?

- ( ) 1
- (•) 2 ✔
- ( ) 3

- 4

Answer
Correct: Video: "Numpy: ndarrays Indexing"

Submit

Answers are displayed within the problem

Multiple Choice

1/1 point (graded)
You are given the following lines of code:

```
arr = np.array([[1,2,3],[4,5,6],[7,8,9]])
slice = arr[:2,1:3]
slice[0,0]
```

What element in arr is equivalent to slice[0,0]?

- arr[0,0]
- arr[0,1] ✔
- arr[2,2]
- arr[0,2]

Answer
Correct: Video: "Numpy: ndarrays Indexing"

Submit

Answers are displayed within the problem

True or False

1/1 point (graded)
Changing an element of an array slice in numpy will NOT change the original array.

- ○ True
- ◉ False ✔

Answer
Correct: Video: "Numpy: ndarrays Indexing"

Submit

ℹ Answers are displayed within the problem

Checkboxes

1/1 point (graded)
In what 3 ways can you quickly access numpy array elements?

- ☑ Slicing ✔
- ☑ Using an array of indices ✔
- ☑ Boolean indexing ✔
- ☐ Segmenting an array

✔

Answer
Correct:
Video: "Numpy: ndarray boolean Indexing"
Video: "Numpy: ndarray boolean Indexing"
Video: "Numpy: ndarray boolean Indexing"
Video: "Numpy: ndarray boolean Indexing"

Submit

Answers are displayed within the problem

Multiple Choice

1/1 point (graded)
What is the correct way to access elements of an array “arr” that are less than 0?

- arr[<0]
- arr[arr<0] ✔
- arr[arr[,]<0]

Answer
Correct: Video: "Numpy: ndarray boolean Indexing

Submit

Answers are displayed within the problem

Checkboxes

1/1 point (graded)
Select two valid ways to get the odd values of an array “arr.”

- arr[(arr % 2 != 1)]
- arr[(arr % 2 != 0)] ✔
- arr[(arr % 2 == 1)] ✔

- [ ] arr[(arr % 2 == 0)]

✔

Answer
Correct:
Video: "Numpy: ndarray boolean Indexing"
Video: "Numpy: ndarray boolean Indexing"
Video: "Numpy: ndarray boolean Indexing"
Video: "Numpy: ndarray boolean Indexing"

Submit

ℹ Answers are displayed within the problem

Multiple Choice

1/1 point (graded)
What requirement is needed to add two numeric numpy arrays?

- (•) They need to have the same or compatible dimensions. ✔
- ( ) They need to be of the same type.
- ( ) They need to be converted to type float first.

Answer
Correct: Video: "Numpy: ndarray DataTypes and Operations"

Submit

ℹ Answers are displayed within the problem

Multiple Choice

1/1 point (graded)
What command allows you to sum all of the elements in an Rank 2 ndarray called “a”?

- a.sum() ✔
- sum(a)
- A+a
- a.add()

Answer
Correct: Video: "Numpy: Statistical, Sorting, and Set Operations"

Submit

Answers are displayed within the problem

Multiple Choice

1/1 point (graded)
What is the result of the following lines of code?

```
a=np.array(["cat","dog","fish"])
b=np.array(["dog","fish","rabbit"])
print(np.setdiff1d(a,b))
```

- ['cat'] ✔
- ['rabbit']
- ['dog' 'fish']
- ['cat' 'dog' 'fish' 'rabbit']

Answer

Correct: Video: "Numpy: Statistical, Sorting, and Set Operations"

Submit

Answers are displayed within the problem

Multiple Choice

1/1 point (graded)

What is the output of the following broadcasting call?

```
A = np.array([[1],[2]])
B = np.array([[1,2],[3,4]])
A + B
```

- array([[2, 3], [5, 6]]) ✔
- array([[2, 4], [4, 6]])
- array([[1, 2], [3, 4],[1,2]])
- Value Error

Answer

Correct: Video: "Numpy: Broadcasting"

Submit

Answers are displayed within the problem

True or False

1/1 point (graded)

Take a look at the following lines of code:

```
a = np.array([2, 3])
b1 = np.array([1])
b2 = 1
```

True or False: a+b1 and a+b2 result in the same ndarray.

- (•) True ✔
- ( ) False

Answer
Correct: Video: "Numpy: Broadcasting"

Submit

Answers are displayed within the problem

Checkboxes

1/1 point (graded)
Which of the following are benefits of ndarrays over lists? Select 3.

- [x] Ndarrays are more space efficient. ✔
- [x] Ndarrays are more optimized for memory. ✔
- [x] Ndarrays often have faster computation. ✔
- [ ] Ndarrays have more variable types than lists.

✔

Answer
Correct:
Video: "Numpy: Speed Test ndarray vs list"
Video: "Numpy: Speed Test ndarray vs list"
Video: "Numpy: Speed Test ndarray vs list"
Video: "Numpy: Speed Test ndarray vs list"

Submit

Answers are displayed within the problem

Multiple Choice

1/1 point (graded)
In an RGB images, which three values specifying a pixel's color correspond to the color white?

- 255, 255, 255 ✔
- 0, 0, 0
- 100, 100, 100
- 255, 0, 255

Answer
Correct: Video: "Satellite Image Example"

Submit

Answers are displayed within the problem

Multiple Choice

1/1 point (graded)
Which layer of the 3 layer matrix of colors corresponds to the color blue when working with images in Numpy?

- Layer 0

- Layer 1
- Layer 2 ✔

Answer
Correct: Video: "Satellite Image Example"

Submit

Answers are displayed within the problem