✓ **Congratulations! You passed!**

| **Grade** received 90% | **Latest Submission Grade** 90% | **To pass** 70% or higher | **Go to next item** |

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1. What is the result of the following lines of code?   **1 / 1 point**

```
1   a=np.array([-1,1])
2   b=np.array([1,1])
3   np.dot(a,b)
```

○ array([0,2])

○ 1

◉ 0

✓ **Correct**
correct

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2. How do you perform matrix multiplication on the numpy arrays **A** and **B** ?   **1 / 1 point**

○ A+B

○ A*B

◉ np.dot(A,B)

✓ **Correct**
correct

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3. What values does the variable **out** take if the following lines of code are run?   **1 / 1 point**

```
1
2   X=np.array([[1,0,1],[2,2,2]])
3   out=X[0:2,2]
4   out
5
```

○ array([1,0])

◉ array([1,2])

○ array([1,1])

✓ **Correct**
correct, the first index corresponds to the rows the second index corresponds to the columns

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4. What is the value of **Z** after the following code is run?   **1 / 1 point**

```
1
2   X=np.array([[1,0],[0,1]])
3   Y=np.array([[2,1],[1,2]])
4   Z=np.dot(X,Y)
5
```

◉ array([[2,1],[1,2] ])

○ array([[2,0],[1,0]])

○ array([[3,1],[1,3] ])

✓ **Correct**
correct, the dot function corresponds to matrix multiplication

5. Consider the following text file:  **Example1.txt**:

This is line 1

This is line 2

This is line 3

What is the output of the following lines of code?

```
1
2   with open("Example1.txt","r") as file1:
3
4       FileContent=file1.read()
5
6       print(FileContent)
```

1 / 1 point

⦿ This is line 1

   This is line 2

   This is line 3

◯ This is line 1

◯ This

✓ **Correct**
   Correct.

6. Consider the following line of code:

```
1
2   with open(example1,"r") as file1:
3
```

What mode is the file object in?

1 / 1 point

⦿ read

◯ write

◯ append

✓ **Correct**
   Correct, the mode is set to r for read.

7. What do the following lines of code do?

```
1
2   with open("Example.txt","w") as writefile:
3
4     writefile.write("This is line A\n")
5     writefile.write("This is line B\n")
6
```

1 / 1 point

◯ Read the file "Example.txt"

⦿ Write to the file "Example.txt"

◯ Append the file "Example.txt"

✓ **Correct**
   Correct.

8. What do the following lines of code do?

```
1
2   with open("Example3.txt","w") as file1:
3
4     file1.write("This is line C\n")
5
```

0 / 1 point

◯ Read the file "Example3.txt".

⦿ Append the file "Example3.txt".

◯ error

9. Consider the dataframe **df**. How would you access the element in the 2nd row and 1st column?

**1 / 1 point**

⊙ df.iloc[1,0]

◯ df.iloc[2,1]

◯ df.iloc[0,1]

⊘ **Correct**
   correct

10. What method gets the unique elements of the following: **df['Length']** ?

**1 / 1 point**

⊙ unique

◯ head

⊘ **Correct**
   correct