✅ **Congratulations! You passed!**

Grade	Latest Submission	To pass 70% or	
received 100%	Grade 100%	higher	**Go to next item**

1. What is the result of the following lines of code?

1 / 1 point

```
1   a=np.array([0,1])
2   b=np.array([1,0])
3   np.dot(a,b)
```

◉ 0

◯ 1

◯ array([1,1])

✅ **Correct**
  correct

2. 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([[0,1],[1,0]])
4   Z=X+Y
5
```

◉ array([[1,1],[1,1]])

◯ array([[1,0],[0,1]])

◯ array([[0,1],[1,1]])

✅ **Correct**
  correct, the '+' corresponds to matrix addition

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

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**:

1 / 1 point

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)
```

◉ This is line 1

  This is line 2

  This is line 3

○ This is line 1

○ This

✓ **Correct**
   Correct.

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6. Consider the following line of code: 1 / 1 point

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

What mode is the file object in?

◉ read

○ write

○ append

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

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7. What do the following lines of code do?   1 / 1 point

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

○ Read the file "Example.txt"

◉ Append the file "Example.txt"

○ Write to the file "Example.txt"

✓ **Correct**
   Correct.

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8. What task do the following lines of code perform?   1 / 1 point

```
1
2    with open('Example2.txt','r') as readfile:
3        with open('Example3.txt','w') as writefile:
4            for line in readfile:
5                writefile.write(line)
6
```

○ Print out the content of Example2.txt.

○ Check the mode of the open function for each file object.

◉ Copy the text from Example2.txt to Example3.txt.

✓ **Correct**
   Correct.

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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 function would you use to load a csv file in Pandas?

1 / 1 point

◉ pd.read_csv

◯ pd.read_excel

✓ **Correct**
   correct

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✓ **Correct**
   correct