

What code will define a function called "multTwo" to accept two numbers, compute their product, and return it to the calling program?

**A:**

```
def multTwo (a, b):  
    return a * b
```

What code will define a function called "multTwo" to accept two numbers, compute their product, and display it?

**A:**

```
def multTwo (a, b):  
    print ( a * b )
```

The code below defines a function to do data validation. What will be the value of the variable 'name' after the code is executed?

```
def validState (a):  
    states = (('AK', 'Alaska'), ('CA', 'California'),  
              ('MD', 'Montana'), ('VA', 'Vermont'))  
    for s in states:  
        if a == s[0]:  
            return s[1]  
    print ('Invalid abbreviation')
```

```
name = validState ('VA')
```

**A:**

**Vermont**

What will be the display output of the following code?

```
def addNums (w, x, y = 10, z = 20):  
    sum = w + x + y + z  
    if sum > 100:  
        return 'huge'  
    if sum%2 == 0:  
        return 'even'  
    return 'odd'  
    print ('End of function')
```

```
print (addNums(1, 3, z = 90))
```

**A. huge**

What will be the display output of the following code?

```
def addNums (w, x, y = 10, z = 20):  
    sum = w + x + y + z  
    if sum > 100:  
        return 'huge'  
    if sum%2 == 0:  
        return 'even'  
    return 'odd'  
    print ('End of function')
```

```
print (addNums(1, 3, 5, 6))
```

**A. odd**

```
def addNums (inNums):  
    sum = 0  
    for n in inNums:  
        sum += n  
    return sum
```

```
numList = [1, 3, 5, 7, 9]  
print (addNums(numList))
```

**A. 25**

What will be the display output of the following code?

```
def addNums (w, x, y = 10, z = 20):  
    sum = w + x + y + z  
    if sum > 100:  
        return 'huge'  
    if sum%2 == 0:  
        return 'even'  
    return 'odd'  
    print ('End of function')
```

```
print (addNums(3, 5, 7))
```

**A. odd**

```
def printReceipt (items):  
    for n in range (len(items)):  
        print(n + 1, items[n])  
    return True
```

```
items = ['milk', 'eggs', 'bread', 'ale']  
printReceipt(items)
```

**A:**

**1 milk**

**2 eggs**

**3 bread**

**4 ale**

```
indata = fi.read()
```

**A: indata will be a string containing the entire file**

A text file has the following data:

```
Washington
Adams
Jefferson
```

After the above file is opened as “fi”, what will be the display output of the following code?

```
x = fi.readlines()
for line in x:
    print(line)
```

**A: Washington**  
**Adams**  
**Jefferson**

A list of continents:

```
continents = ['Africa', 'Antarctica', 'Asia', 'Australia', 'Europe',
              'North America']
```

What code will write the names of the continents to a file called ‘continents.txt’ so that they will appear as lines 1 – 6 in the file when a text editor like Notepad is used to display the file?

**A: f = open('continents.txt', 'w')**  
**for c in continents:**  
 **f.write(c + '\n')**  
**f.close()**

What code would convert the above list (assume more than the one shown) into a dictionary called ‘prez’ using the year elected as the key and the name of the president as the value?

**prez = { }**  
**for p in presidents:**  
 **prez[p[1]] = p[0]**

A list of grocery items purchased is in this list:

```
items = [['eggs', 2.50], ['Vie de France baguette', 1.95],
          ['Pinot Noir', 11.0]]
```

What code is needed to print the receipt as in the previous question, but add a total cost at the bottom labelled “Total” and line it up with the printed items?

**A: def receipt (inlist):**  
 **total = 0.0**  
 **for item in inlist:**  
 **print (' {0:20s} \${1:8.2f}'.format(item[0], item[1]))**  
 **total += item[1]**  
 **print (' {0:20s} \${1:8.2f}'.format("Total", total))**

```
indata = fi.readlines()
```

**A: indata will be a list consisting of one string for each line in the file**

A text file ‘states.txt’ has the following data:

```
AL,Alabama,Montgomery
```

What code that uses the **split** method will open and read the file, create the list below, and assign it the variable name “L”:

```
['AL', 'Alabama', 'Montgomery'] ?
```

The code must work for all possible U.S. states, not just the ‘AL’ example above.

**A: f = open('states.txt', 'r')**  
**x = f.read()**  
**L = x.split(',')**  
**L[2] = L[2].strip( )**

You’re writing code to maintain a dictionary of US presidents and the year they were elected. The key is the year, the name is the value. The dictionary looks like this:

PD = {1788: ‘Washington’, ... 2020: ‘Biden’}, but doesn’t have all presidents. Prompt the user for a year. If it’s in PD, print a message stating ‘already there’. If not there, prompt again for the president’s name and add it to the dictionary. Detect when a non-integer year is entered using an exception handler and re-prompt until a valid year is entered.

**while True:**  
 **try:**  
 **year = int(input('Enter year: '))**  
 **if year in PD:**  
 **print('already there')**  
 **else:**  
 **name = input('Enter presidents name: ')**  
 **PD [year] = name**  
 **break**  
 **except:**  
 **print('year must be an integer – please re-enter')**