

CS414: Recitation #5

Your Name: _____

You are *encouraged* to work together with other students, but you must turn in your own copy of your work. Using a computer is OK, but try to solve it first.

1. Consider the following python code, which works on one or more lists.
What is the output of each **print** statement?

```
import copy
pi = [3, 1, 4, 5, 1, 9]
```

OUTPUT:

```
print pi[2]
```

```
print pi[-2]
```

```
print pi[1:5]
```

```
print pi[-4:]
```

```
print pi[:4]
```

```
print len(pi)
```

```
print pi.count(1)
```

```
print pi.index(1)
```

```
print pi.index(1, 2)
```

```
pi2 = pi
```

```
pic = copy.copy(pi)
```

```
pi2[0] = 8
```

```
pic[0] = 9
```

```
print pi[0]
```

```
print pi == pic
```

```
print pi == pi2
```

```
pi.pop()
```

```
print pi
```

```
pi.insert(2, 7)
```

```
print pi
```

2. Consider the following python program:

```
def translate(a_sentence, a_dictionary):
    new_sentence = []
    for i in range(len(a_sentence)):
        word = a_sentence[i]
        if word in a_dictionary:
            k = a_dictionary.index(word)
            word = a_dictionary[k + 1]
        new_sentence.append(word)
    return new_sentence

sentence = ['the', 'boy', 'ate', 'the', 'apple']
dictionary = ['apple', 'argument', 'boy', 'bobcat', 'ate', 'applied']

sentence = translate(sentence, dictionary)
print sentence
```

What is the output? _____