Review Questions – Complete: Prior to watching Friday 5/15 lecture

Let’s consider some of the finer points of pythonic programming:

1. Convert the following if/else into a one-line return statement:

   ```python
   if mylist is not None and len(mylist) > 24:
       return True
   else:
       return False
   ```

2. Convert the following loop into a one-line list comprehension:

   ```python
   newList = []
   for v in mylist:
       newList.append(v + 5)
   ```

3. Convert the following loop into a one-line list comprehension:

   ```python
   filterList = []
   for v in mylist:
       if v > 7:
           filterList.append(v)
   ```

4. Fix this function, which should generate a stream of lowercase letters in a given String, mystr:

   ```python
   def findLowers(mystr):
       currentIndex = 0
       while True:
           if mystr[currentIndex].islower():
               return mystr[currentIndex]
           currentIndex += 1
   ```

5. Write a line of code that prints the length of LinkedList, ll:

   ```python
   ll = LinkedList()
   ll.extend([0, 1, 2, 3, 4, 5])
   ```

6. sum(self) is a method within the LinkedList class. Write a line of code that uses this method to print the LinkedList, ll’s, sum:

   ```python
   ```

7. __contains__(self) is a special method in Python. Write a line of code that implicitly calls this method, to see if our LinkedList, ll, contains the value 24:

   ```python
   ```

8. Recall our Tree class. Write a method for Tree objects that counts the number of leaf nodes in the tree:

   ```python
   ```