1. Write down the value and type of each of these expressions. Assume that the `math` and the `sys` modules have been imported prior to the execution of these expressions. Also, suppose that the value of `sys.maxint` is 9223372036854775807.

(a) 100L + 200
   Value: 300L
   Type: Long

(b) `math.ceil(10.97) - math.floor(11.17)`
   Value: 0.0
   Type: Float

(c) `len(str(10.97))`
   Value: 5
   Type: Int

(d) `bin(5) + bin(3)`
   Value: 0b1010b11
   Type: String

(e) `sys.maxint + 2`
   Value: 9223372036854775809L
   Type: Long

Please turn the page over for the second problem.
2. Here is a partly completed program to find the largest and the second-largest numbers in a given sequence of numbers. You are required to complete the program by filling in the blanks. The program starts by prompting the user for a positive integer, let us call this \( n \), that represents the length of her sequence. The program then reads \( n \) non-negative integers input by the user (typed one in each line) and outputs the largest and the second-largest numbers in the given sequence.

```python
n = int(input("Enter a positive integer: "))
print "Now please enter", n, "non-negative integers, one per line"

max = -1
secondMax = max

count = 1
while (count <= n):
    currentNumber = int(input())

    # Case 1: The current number is at least as large as the current max
    # FILL IN THE TWO LINES OF CODE BELOW
    if currentNumber >= max:
        secondMax = max
        max = currentNumber

    # Case 2: The current number smaller than the current max, but at least as large as the current secondMax
    # FILL IN THE ONE LINE OF CODE BELOW
    if (max > currentNumber) and (currentNumber >= secondMax):
        secondMax = currentNumber

    count = count + 1

print "The largest number is", max
print "The second largest number is", secondMax
```