NAME: _____

CS21 Lab 4 written part. Due: beginning of class Fri. 23 Feb.

Consider the following program:

```
1   def main():                                        Draw Stack Diagram Here
2       print("in main")                               _____
3       val = 23
4       x = 5
5       y = 17
6       result = mystery(val, x, y)
7
8       #See Question 2
9       print("val: %d"  % (val))
10      print("Result: %d" % (result))
11
12  # mystery function:
13  def mystery(num, lb, ub):
14
15      print("in mystery")
16
17      #See Question 3
18      if num < lb:
19          num = num + lb
20
21      if num >= ub:
22          num = ub
23
24      #See Question 1
25      return num
26
27  main()
```

1. To the right of the program text, draw the stack as it appears when the program reaches the line #See Question 1.

2. For the line #See Question 2, which variables are currently in scope? That is, which variables can you refer to at this line without getting a runtime error?

3. For the line #See Question 3, which variables are currently in scope?

4. What output is produced by the whole program?