

Name: _____

CS21 Lab 4 Written Part – Due: Fri, Sept. 30, beginning of class

```
1 def main():
2     print("in main")
3
4     num = 7
5     x = 3
6     y = 4
7     result = mystery(num, x, y)
8
9     # Scope for Q2
10    print("num: " + str(num))
11    print("result: " + str(result))
12
13 # mystery function
14 def mystery(val, a, b):
15     print("in mystery")
16
17     # Scope for Q3
18     if (val > a):
19         val = b
20
21     # Draw stack at this point in execution
22     return val
23
24 main()
```

DRAW STACK HERE

1. To the right of the program code (in the area beneath DRAW STACK HERE), draw the stack as it appears when the program reaches line 21.
2. At line 9 (marked *# Scope for Q2*), what variables are currently in scope? That is, what variables can you refer to without getting a runtime error?
3. At line 17 (marked *# Scope for Q3*), what variables are in scope?
4. Below, give the output that would be produced by running the whole program to completion: