NAME: _____

CS21 Fall 2021, Written portion of Lab 4

Due at the beginning of class Friday, October 1

Consider the following program:

```
                                        DRAW STACK HERE
                                        ---------------
def clamp(val, lo, hi):
    print("in function...")

    #scope Q3

    if val < lo:
        val = lo

    if val > hi:
        val = hi

    #stack Q1

    return val

def main():
    a = 17
    print("in main...")
    result = clamp(a, 0, 10)

    #scope Q2

    print("a: %d"  % (a))
    print("Result: %d" % (result))

main()
```

1. To the right of the program text, draw the stack as it appears when the program reaches the line #stack Q1.

2. For the line #scope Q2, which variables are currently in scope? That is, which variables can you refer to without getting a runtime error?

3. For the line #scope Q3, which variables are currently in scope?

4. What output is produced by the whole program?