**15-112 Fall 2022 Lecture 3**
**Quiz 8B**
**22.5 minutes**

Name: ____________________________________

Andrew ID: ____________________@andrew.cmu.edu

Section: _______

- **You may not use any books, notes, or electronic devices during this quiz.**
- **You may not ask questions about the quiz except for language clarifications.**
- **Show your work on the quiz (not scratch paper) to receive credit.**
- **If you use scratch paper, you must submit it with your andrew id on it, and we will ignore it.**
- **All code samples run without crashing unless we state otherwise. Assume any imports are already included as required.**
- **Do not use these topics: recursion.**
- **You may use almostEqual() and rounded() without writing them. You must write everything else.**

**Do not write below here**

| **Question** | **Points** | **Score** |
|---|---|---|
| 1. FR: Rect and Square | 100 | |
| 3. Bonus | 5 (bonus) | |
| TOTAL | 100 | |

**1. FR: Rect and Square Classes** [100 pts]

Write the Rect and Square classes so that the test function (on a separate handout) works properly. To receive full credit, you must not hardcode methods, and you must use OOP properly (for example, you must call the super's __init__ method in your Square __init__ method).

Note: Write your Rect class on this page and your Square class on the next page. If you need more room for your Rect class, continue it on the bottom half of the next page. If you do that, please write "continued" at the bottom of this page.

This page is for your Square class.

**2. Bonus** [5 pts]
Indicate what these print. Place your answers (and nothing else) in the box next to each block of code.

```
def bonusCt1(f):
    g = lambda n: n if not n else (eval(f)(n) + g(n-1))
    return g(2 + len(f))
print(bonusCt1('lambda x:2*x-1'))
```

```
def bonusCt2(x):
    def f(L): return L*sum(L)
    def g(x): return sum(f(list(range(x))))
    while x < 10**3: x = g(x)
    return x - 1
print(bonusCt2(3))
```