Fall '11 CIS 122 Midterm Review

You may bring one page of notes, front and back.

 You may bring a calculator but shouldn't need one.

Questions will be in short-answer format with partial credit for partial answers.

Questions will require you to read Python code.

You will not be asked to write Python code, but may be asked to write pseudocode (i.e., code that unambiguously describes your solution but is not required to compile).

Topics:

- Variables: int, float, bool, str types, assignment, conversion between types, print function
- int and float operators: +, -, *, /, %, +=, -=, *=, /=, %=, string operators: +, *, precedence
- Math functions: pow, sqrt
- Boolean operators: <, <=, ==, >=, >, and, or
- Conditional statements: if, elif, else
- Looping: while, for, break, continue statements, range function
- Strings: strip, split, find, replace functions, string slicing
- Functions: defining, calling, return statement, when/why to use

Sample questions:

1. [10] Consider the following code:

```
sum = 0

for i in range(1, 10, 2):

        if i % 3 == 0:

                sum += i

print sum
```

What is printed by the above code? Why?

 2. [5] Consider the following code:

```
s = 122

print s.find("1")
```

The code will result in an error. Why?

3. [10] Write pseudocode for a function which takes a string as an argument, replaces all "a" characters in the string with "b" characters, and then returns the modified string.

4. [10] Write pseudocode for a function which takes an int as an argument and returns the square of the number of the number is odd but returns the cube of the number if the number is even.