

CSci 1113

Quiz

Name: _____

Student ID: _____

Instructions: Please pick and answer any 2 of the 3 problems for a total of 20 points. If you answer more than 2 problems, only the first 2 will be graded. The time limit is 15 minutes. Please write your answers in the space provided. The exam is open book and notes. You may use electronic devices to ONLY look at either an e-book version or electronic notes. You may not use the internet, compiler or any other outside resources. (If you are typing on your keyboard/input device for anything other than ctrl-F to find words in the e-book or notes, this is probably not acceptable.)

Problem (1) [10 points] Write a C++ code that will read in a number with a decimal place (assume there is always non-zero numbers before and after the decimal place) and will print out a number with the digits before/after the decimal swapped. For example, if the user entered “23.456”, your code should display “456.23”. (Hint: there is an easy non-mathematical way to do this.)

Problem (2) [10 points] Write the formula

$$d = \frac{2}{3} \cdot x^2 + 3\sqrt{x}$$

as a C++ statement. Assume all the variables involved have already been declared to be of type double, any needed libraries have been included, etc.: all you need to do is write the C++ statement that does the calculation in the formula.

Problem (3) [10 points] Find 3 errors in the code below. Assume that the code is completely shown except for #includes and “using namespace std”. For each error, identify whether it is a runtime error, syntax error or logic error. You must also precisely describe why you think the part of code you identify is an error.

```
int main() {
    int x;
    cout << "How many miles away do you live?\n";
    cin >> x;
    if(12.5 < x < 25) {
        cout << "That's pretty far!\n";
    }
    if(x > 25) {
        cout << "You gadda be kidding me!\n";
    }
    else {
        cout << "Meh...";
    }
}
```