**CS 1301 - Homework 01**

**Due before August 28, 5pm on Vista (WebCT). You may only submit your work once.**

1. **Cups.java** - Write a program that prompts the user for the number of teaspoons of sugar that a recipe calls for and converts this into the number of cups, tablespoons, and teaspoons. (There are 3 teaspoons in a tablespoon and 16 tablespoons in a cup). Use the console for all I/O. For example, if the user enters 178 tablespoons, then the output should look like this:

178 teaspoons is 3 cups, 11 tablespoons, and 1 teaspoons

1. **Solutions.java** - The quadratic formula gives two solutions to the equation . These solutions are:  and . Write a program that prompts the user for the values of *a*, *b*, *c* and displays the two solutions. Use the console for all input and use a message box for all output. Remember that  and in Java, Math.pow(p,1/2) (or Math.sqrt(p) ). Certain values of *a*, *b*, *c* will result in a run-time error. For example,  will cause an error (that is because the solutions are imaginary). These are a few sets of values that work:







You can check your answers at: <http://www.math.com/students/calculators/source/quadratic.htm>

1. **BothSides.java** - Write a program that prompts the user for an integer. Your program will take the integers below and above the user’s number and compute: the product, quotient, integer quotient, and remainder. Use the console for all I/O. Example output:

|  |  |
| --- | --- |
| **Input: 10** | **Input: 212** |
| For the numbers 11 and 9, the  Product is 99  Quotient is 1.222222222  Integer quotient is 1  Remainder is 1 | For the numbers 213 and 211, the  Product is 44943  Quotient is 1.009478673  Integer quotient is 1  Remainder is 2 |