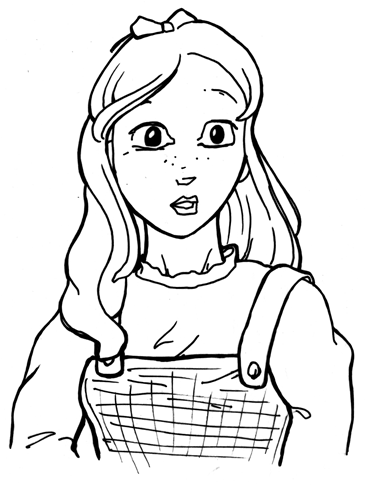
**LESSONS:**

1. The equals sign does not mean equals. Roughly speaking it means "replace with".
2. The plus sign can mean addition or concatenation. They're not the same operation.
3. There can be one and only one variable on the left side of an equals sign. This variable represents a specific location in memory where values can be stored.

CS HW 00

**“Toto, I’ve a feeling we’re not in Algebra anymore”**

# The Lab

1. Take a look at the code below and try to make a prediction. What the code will output if word = "stuff" and num = 1? Make a prediction for each of spots A, B, C, D, and E. Don’t run the code until you do this! You will ruin all the fun!
2. Create a new project called JavaAintAlgebra with a class of the same name. Delete *all* the code in the class. Replace it by typing out this code. Careful of the indentation!

/\*\*

\* This program demonstrates why Java ain't algebra

\*

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\* @edited by Ben Isecke

\*/

import java.util.Scanner;

public class JavaAintAlgebra {

public static void main ( String[] Args ) {

Scanner scan = new Scanner(System.in);

System.out.println("Enter some text");

String word = scan.nextLine();

System.out.println("Enter an integer");

int num = scan.nextInt();

int result ;

// Note: the = sign does not mean equals and Java ain't algebra.

num = num + 1 ;

result = num + 1 ;

// Try uncommenting the code below and see if the program compiles.

// num + 1 = result ;

System.out.println ( "num = " + num + ", result = " + result ) ; // A

// Note: in the above line the + operator does arithmatic

// In the line below, the + operator concatinates.

System.out.println ( word + " " + num + num ) ; // B

System.out.println ( num + num + " " + word ) ; // C

System.out.println ( word + " " + num + num ) ; // D

System.out.println ( word + " " + num ) ; // E

}

}

1. Run the code and input a string called "stuff" and the integer 1. Note: Strings are objects that contain text. Enclosing text in double quotes creates a String. example: "This is a String." This is not a String. Try to make some sense of what actually happened. Why did it output what it output? Write what happened at A, B, C, D, and E – did it match your predictions?
2. Uncomment (this means to delete the double forward slash) the following line in the program:

// num + 1 = result ;

1. Try to re-run the program. What happens?
2. Repeat ten times to yourself, "Java ain't algebra."
3. Submit numbers 1 (A, B, C, D, & E), 3 (A, B, C, D, & E), and 5 to Mr. Isecke for your homework grade.