Midterm Review – Intro to Programming – Fall 2013

**Important Topics**

* Variables – how and why to use them
* Using Booleans
* Logical operators
* Defining functions
* Returning values
* Creating arrays
* Accessing values in arrays
* Creating and understanding for loops
* Using modulo
* Using ArrayLists
* Choosing between arrays and ArrayLists

**General**

* Understand how to declare and initialize various types of data
* Understand what active and static modes are

**Variables**

* What types did we use? What do you know about each type?
* What predefined variables did we use? What is a predefined variable?

**Booleans**

* Booleans are a data type. You can create boolean variables or boolean functions
* What are ways you can work with Booleans that you can’t work with other data types?

**Logical Operators**

* AND, OR, and NOT
* &&, ||, !
* How can you use them?

**Defining Functions**

* Be able to define functions that return values and functions that don’t return values
* What is meant by “return a value”?
* Why do some functions start with void? This includes void setup(){} and void draw(){}

**Arrays**

* Know how to declare and initialize an array
* Know how to access data in an array

**For Loops**

* Be able to create and understand for loops
* You may be asked to fill in the blanks to create a for loop to accomplish a given task
* You may be asked to describe what will happen each time through a for loop
* Expect to see for loops involving arrays and for loops not involving arrays

**Modulo**

* Modulo is a way of calculating the remainder after dividing a value by another value
* Great for repeating patterns

**ArrayLists**

* Know how to refer to the size of an ArrayList
* Be able to write code to loop through an ArrayList and use a method on every object in that ArrayList
* Know when it would be better to use an array and when it would be better to use an ArrayList