## Worksheet 1

In the lesson Java program file, the class definition had two features: a “public” keyword and the name matching the file name.

1. **What would happen if you tried to run the program with a class name that did not match the file name?**
2. **What would happen if you tried to run the program without the public keyword? What can you hypothesize about this keyword based on that test?**

Also inside the class was a main method. Without a class that contains this method, the Java program would not be able to execute properly.

1. **In the lesson Java program file, the basicMethod() method was able to be called directly in main. Which keyword was the main factor in this behavior? Describe what this keyword does.**

In your Java programs you can import packages that give you access to existing classes, methods, and logic. In the example program, near the top of the file, below the other “import” line of code, add the following: import java.lang.\*;

This package will, in part, give you access to different mathematical functions. You can now access the square root function for example by typing Math.sqrt().

1. **Create a new method underneath basicMethod() to calculate the pythagorean theorem to solve for the hypotenuse of a right triangle. Set the name of the method to get\_pythagorean. In the main method, replace the call to basicMethod() with a call to get\_pythagorean().**

After adding your logic, you should see an error on the return line of get\_pythagorean.

Because the int type, or integer, can’t have floating point numbers, and because the sqrt() function returns a floating point number, you will need to change all the instances of int in the method to double.

1. **After making the changes described above, test your logic with different inputs in the method call line in the main method. Demonstrate your program to your instructor.**

Remember to change the comment in your main method as well to reflect the change you made.

1. **Write the javadoc style comment for the get\_pythagorean() method. It should contain a method description, @param lines for both inputs and an @return line for the output.**