JUnit Testing – Lab Worksheet

**Name: Alex Ng\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_6\_\_\_\_**

**Test for mystery1:**

**What types are the method parameters for mystery1? What is the method return type?**

Int parameters. Int return type.

**Read the comment. What is the mystery1 method supposed to do?**

Returns greatest common divisor.

**Are there any initial conditions required for the test? How would you set up these initial conditions?**

Need object to run method which will be tested to see if it works. Mystery x = new Mystery(“Alex”);

**What actions do you need to carry out in your test? What method calls do you need to make?**

Call method1 through the object x. Need to use assertEquals to test method.

**What are the expected results of carrying out your actions? What assertions can you make? Make sure to include at least 10 assertions.**

Expected returning the variable a when a<b and when a=b. Returns a – b when a >b.

**Run the test. What are the test results? Which assertions failed?**

*assertEquals*(1,x.mystery1(5,6));

*assertEquals*(1,x.mystery1(7,6));

*assertEquals*(2,x.mystery1(2,6));

*assertEquals*(3,x.mystery1(3,9));

*assertEquals*(2,x.mystery1(4,2));

*assertEquals*(1,x.mystery1(5,1));

*assertEquals*(1,x.mystery1(8,9));

*assertEquals*(1,x.mystery1(7,6));

*assertEquals*(3,x.mystery1(6,3));

*assertEquals*(1,x.mystery1(2,1));

All assertions passed.

**What conclusions can you make about the method? What might cause a bug in this method? Is it entirely bug-free? If your test failed, why did it fail? What evidence supports your conclusion?**

The method is flawed. If we put negatives in, it doesn’t work. Not entirely bug free. Test all passed.

**Test for mystery2:**

**What types are the method parameters for mystery2? What is the method return type?**

Double return types and double parameters.

**Read the comment. What is the mystery2 method supposed to do?**

Returns the maximum for the equation when using the quadratic formula.

**Are there any initial conditions required for the test? How would you set up these initial conditions?**

Make the method. Mystery a = **new** Mystery("Hi");

**What actions do you need to carry out in your test? What method calls do you need to make?**

Need to assert the test. *assertEquals*(-2,a.mystery2(1,5,6),0.01);

**What are the expected results of carrying out your actions? What assertions can you make? Make sure to include at least 10 assertions.**

Expected the greatest return type of using the quadratic formula on 3 variables.

*assertEquals*(-2,a.mystery2(1,5,6),1);

*assertEquals*(-3,a.mystery2(1,7,12),1);

*assertEquals*(3,a.mystery2(2,4,-30),0.01);

*assertEquals*(-2,a.mystery2(2,10,12),1);

*assertEquals*(-3,a.mystery2(2,14,22),1);

*assertEquals*(3,a.mystery2(4,8,-60),1);

*assertEquals*(3,a.mystery2(8,16,-120),1);

*assertEquals*(-3,a.mystery2(4,28,44),1);

*assertEquals*(-2,a.mystery2(4,20,24),1);

*assertEquals*(3,a.mystery2(16,32,-240),1);

**Run the test. What are the test results? Which assertions failed?**

All failed cause I calculated them perfectly.

**What conclusions can you make about the method? What might cause a bug in this method? Is it entirely bug-free? If your test failed, why did it fail? What evidence supports your conclusion?**

Nothing wrong with the method. It runs with negatives and even doubles and ints. Nothing failed.

**Remember to include your JUnit test files!** (Put them in this same folder and make sure they are included in your pull request.)