**Chapter 6 – Methods - Worksheet**

1. What are the three benefits of using a method?
   1. What does modularization do for code?
      1. Is this why we want to use methods?
2. What is the return type of a main method?
3. How many variables/values can be returned from a method?
4. How many variables/values can be passed to a method?
5. Identify the following terms on the following Java code:
   1. Method name
   2. Method definition
   3. Invoking statement
   4. Method header
   5. Method body
   6. Modifiers
   7. Return type
   8. Method signature
   9. Formal parameters
   10. Actual parameters

public class Identify{

public static void main(String [] args){

System.out.println(whatToDo(2, 3, 6));

}

public static String whatToDo(int n1, int n2, int n3){

return “nothing”;

}

}

1. In the method signature, does each parameter have to have its own data type listed?
2. In the invoking statement, does each parameter have to have its own data type listed?
3. If a value is returned from a method, what does the invoking statement have or be able to do?
4. When is the return keyword used?
5. Where should the return keyword be placed in the method?
6. Do all methods have to use the return keyword?
7. What does the invoking/calling statement do?
8. If there is not an invoking/calling statement to a method, is that method executed?
9. Identify and correct the errors in the following program:

public class ProgName{

public static method1(int n, m){

n+= m;

method2(3.4);

}

public static int method2(int n){

if (n > 0) return 1;

else if (n == 0) return 0;

else if(n < 0) return -1;

}

}

1. Write method headers and the invoking statement for:
   1. Compute a sales commission, given the sales amount and the commission rate.
   2. Compute a square root of a number.
   3. Display a message a specified number of times.
   4. Return the area of a square, given the length of the side
   5. Return the average of 4 whole numbers
   6. Return the payment amount, given the total price, the interest rate, and how many years the loan will be
   7. Printing the date, nothing passed in and nothing returned
   8. Return the percent of a decimal number
   9. Returns a description of how well you did on a test score
2. Why do we want to be able to overload methods?
3. How does one overload methods?
4. What is the scope of a variable?
5. Using the following code, identify the scope of x.

public class Scope{

public static void main(String [] args){

int y = 9;

String s = “word”;

if(y == 0){

System.out.println(“y is 0”);

int x = y;

}

}

}