Practice Questions, Set 2: Arrays and Methods

1. Write a method that finds the average of values stored in the array of doubles.

2. Is it an error to overrun the end of an array? Is it an error to index an array with a negative value?

3. Show how a method called myMeth( ) is declared if it has a return type of double and has two int parameters called a and b.

4. Write preconditions for the following methods, then implement the methods.

   ```java
   public static double sqrt(double x)
   public static String romanNumeral(int n)
   public static String weekday(int day)
   ```

5. Consider the following method that is intended to swap the values of two floating point numbers:

   ```java
   public static void falseSwap(double a, double b)
   {
     double temp = a;
     a = b;
     b = temp;
   }
   public static void main(String[] args)
   {
     double x = 3;
     double y = 4;
     falseSwap(x, y);
     System.out.println(x + " " + y);
   }
   ```

   What is the output of the program and why?

6. Write a method that, given two sorted arrays of integers, merges the two arrays into a single sorted array that is returned.

7. Write a method that, given an array of integers, computes the sum of every other number (starting at the zero’th index) and returns true if the sum is divisible by 10 and false otherwise.