Function practice problems:

1. Write a function named `trouble` which takes two boolean parameters and returns a boolean value. The input parameters represent whether Monkey1 and Monkey2 are smiling (in other words, each is true if the monkey they are associated with is smiling. We are in trouble if both monkeys are smiling or if neither monkey is smiling. Return true if we are in trouble.

```java
public static boolean trouble(boolean m1, boolean m2) {
    if (m1 && m2) { // both are smiling
        return true;
    } else if (!m1 && !m2) { // neither are smiling
        return true;
    } else {
        return false;
    }
}
```

2. Write a function named `puppyConversion` which takes an integer representing the number of puppies as a parameter. Each puppy is equivalent to 5.25 units of cuteness (it's true! look it up). You need to write a function which converts the number of puppies to the equivalent units of cuteness and returns that value.

```java
public static double puppyConversion (int puppies) {
    return puppies * 5.25;
}
```

3. Write a function named `averageElements` which takes an array of integers and an integer as parameters. The function should return the average of the first \( n \) elements (\( n \) is represented by the 2nd parameter to your function) of the array. Pay attention to your integer vs. double datatypes. The average should be as accurate as possible.

```java
public static double averageElements(int[] a, int n) {
    double sum = 0.0;
    for (int i = 0; i < n; i++) {
        sum += a[i];
    }
    return sum/n;
}
```

4. Write a function named `averageEvens` which takes an array of integers and an integers as
parameters. The function should return the average of the first n even elements. If the array contains no even elements or fewer than n even elements, your function should return -1.

```java
public static double averageEvens(int[] a, int n) {
    if (a.length < n) { //not enough elements in array
        return -1.0;
    }

    int count = 0;
    //count evens first to make sure we have enough
    for (int i = 0; i < a.length; i++) {
        if (a[i] % 2 == 0) { //data in array at position i is even
            count++;
        }
    }

    if (count < n) {
        //count of even elements in array is less than
        //the number, n, of requested elements
        return -1.0;
    }

    //use sum variable to keep track of the sum of the
    //even numbers we find, up to n numbers
    double sum = 0.0;

    //use this to keep track of the count of even numbers
    //we've found in the array
    count = 0;

    for(int i = 0; i < a.length; i++) {
        //if data is even, add it to sum and count it
        if (a[i] % 2 == 0) {
            count++; //add 1 to our count of even numbers
            sum += a[i]; //add data to sum
        }
        if (count == n) { //we've found n even numbers, so calc
            average and return it
            return sum/n;
        }
    }
}
```

Array practice problems: See lab 9 for some sample practice problems. Work them out on paper to get some exam practice before going to lab. Then use the lab time to check and refine your understanding.