1.

```java
public static string flip() {
  if (Math.random() > 0.33) {
    return "head";
  }
  else {
    return "tails";
  }
}
```

2.

```java
public static boolean arePermutations(int[] a, int[] b){
    for(int i = 0; i < a.length; i++){
        boolean test1 = false;
        for(int k = 0; k < b.length; k++){
            if(a[i] == b[k]){
                test1 = true;
            }
        }
        if(test1){
            return true;
        }

    }
    return false;
}
```

3. 1, 2, 2, 2