

Exercise 2

For each method, write one sentence that describes what the method does, without getting into the details of how it works. For each variable, identify the role it plays.

METHOD A. banana

```
public static int banana(int[] a) {  
    int kiwi = 1;  
    int i = 0;  
    while (i < a.length) {  
        kiwi = kiwi * a[i];  
        i++;  
    }  
    return kiwi;  
}
```

- **DESCRIPTION:**
This method multiplies each value in the array by each other.
- **VARIABLE ROLES:**
 - **a:** the array
 - **kiwi:** stores the most current value of the calculation as it traverses through the array
 - **i:** counts the loops/tracks the iterations as reference to know when to stop ("index")
 - **a.length:** identifies the number of elements in the array

METHOD B. grapefruit

```
public static int grapefruit(int[] a, int grape) {  
    for (int i = 0; i < a.length; i++) {  
        if (a[i] == grape) {  
            return i;  
        }  
    }  
    return -1;  
}
```

- **DESCRIPTION:**
This method returns the index where the target value "grape" appears or returns a "failed search" if grape isn't found.
- **VARIABLE ROLES:**
 - **a:** the array
 - **grape:** the target value being searched for
 - **i:** counts the loops/tracks the iterations as reference to know when to stop ("index") and helps reference the index of the target value
 - **a.length:** identifies the number of elements in the array

METHOD C. pineapple

```
public static int pineapple(int[] a, int  
apple) {  
    int pear = 0;  
    for (int pine: a) {  
        if (pine == apple) {  
            pear++;  
        }  
    }  
    return pear;  
}
```

- **DESCRIPTION:**
This method loops through each element in the array, adding 1 to a total sum at the end whenever it finds the target value "apple".
- **VARIABLE ROLES:**
 - **a:** the array
 - **apple:** the target value being searched for and counted
 - **pine:** counts the loops/tracks the iterations
 - **pear:** a value that possible changes with each iteration of the loop, counting the frequency of the target value, "apple"