

CSSE 230: Basic analysis of algorithms worksheet.

Consider the following procedure:

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

- 1) Which expression is representative of the “work” done by the procedure?
- 2) When does the **best** case occur?
- 3) How many times does the expression from (1) get execute in the **best** case?
- 4) When does the **worst** case occur?
- 5) How many times does the expression from (1) get execute in the **worst** case?
- 6) What do we mean by the **average** case?

Space for notes of average case analysis: