

## CSE 332: Data Structures and Parallelism

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### QuickCheck: Recurrences (due Thursday, October 12, 2016)

Name:

#### 0. Happening Happening Happening

Consider the following code:

```
1 f(n) {
2   if (n <= 1) {
3     return 0;
4   }
5
6   int result = 0;
7   for (int i = 0; i < n; i++) {
8     for (int j = 0; j < i; j++) {
9       result += j;
10
11     }
12   }
13   return f(n/2) + result + f(n/2);
14 }
```

(a) Find a recurrence for the time complexity of  $f(n)$ .

(b) Find a Big- $\mathcal{O}$  bound for your recurrence.