

## CS120 - Assignment 12

### Fall 2014

This assignment does not need to be turned in, but it might make good practice for the final exam.

For integer values of  $n$ , the value of  $n^2$  can be computed using the following recurrence relation:

$$\begin{aligned}f(0) &= 0 \\f(n) &= 2(n-1) + 1 + f(n-1) \quad (\text{for } n > 0)\end{aligned}$$

Write a recursive function which returns the integer value of the square of the function's single integer argument, using the recurrence relation given above.

Include comments in your "code" which:

- Clearly indicate the code for the terminating case
- Indicate what decreases about the recursive function call