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:

\[
\begin{align*}
  f(0) &= 0 \\
  f(n) &= 2(n - 1) + 1 + f(n - 1) \quad (\text{for } n > 0)
\end{align*}
\]

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