

Count the number of times the loop runs.

When $i = 0$, it runs for N times.

When $i = 1$, it runs for $N - 1$ times ...

When $i = k$, it runs for $N - k$ times

So, total number of runs = $N + (N - 1) + (N - 2) + \dots 1 + 0 = ???$