

## In-class exercises: Recurrences

Solve by iteration the following recurrences. Once you found the solution, try to prove it by induction (only the  $O()$  bound).

1.  $T(n) = T(n/2) + 1$

2.  $T(n) = T(n - 1) + 1$

3.  $T(n) = T(n - 1) + n$

4.  $T(n) = 2T(n - 1) + 1$