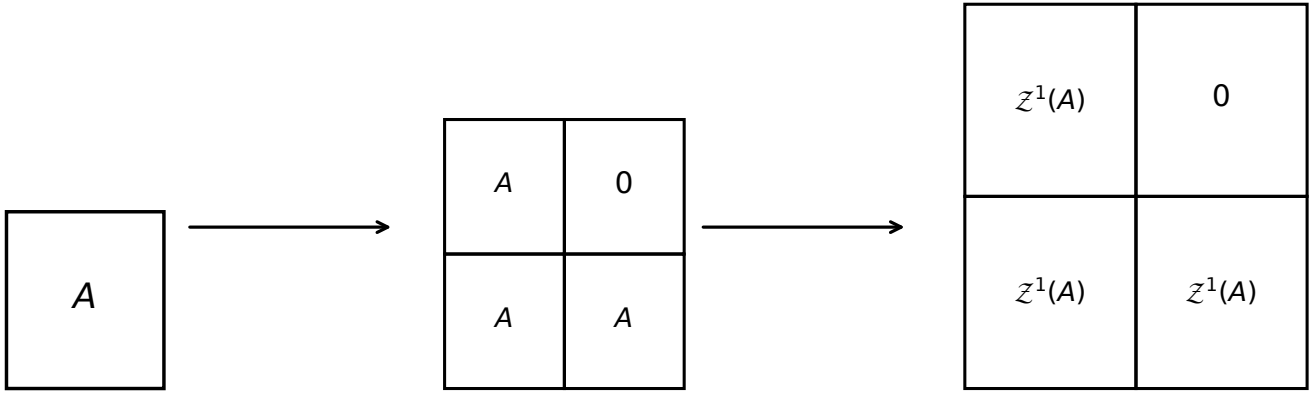
Recursive lift $\mathcal{Z}(A)$ with block pattern $A, 0; A, A$



level 0 level 1 level 2

$\Delta(\mathcal{Z}^r(A)) \geq 2^r \Delta(A)$; exact lower recurrence $a_{r+1} = 2a_r + m2^r$