











even

on first proof (by contradiction)





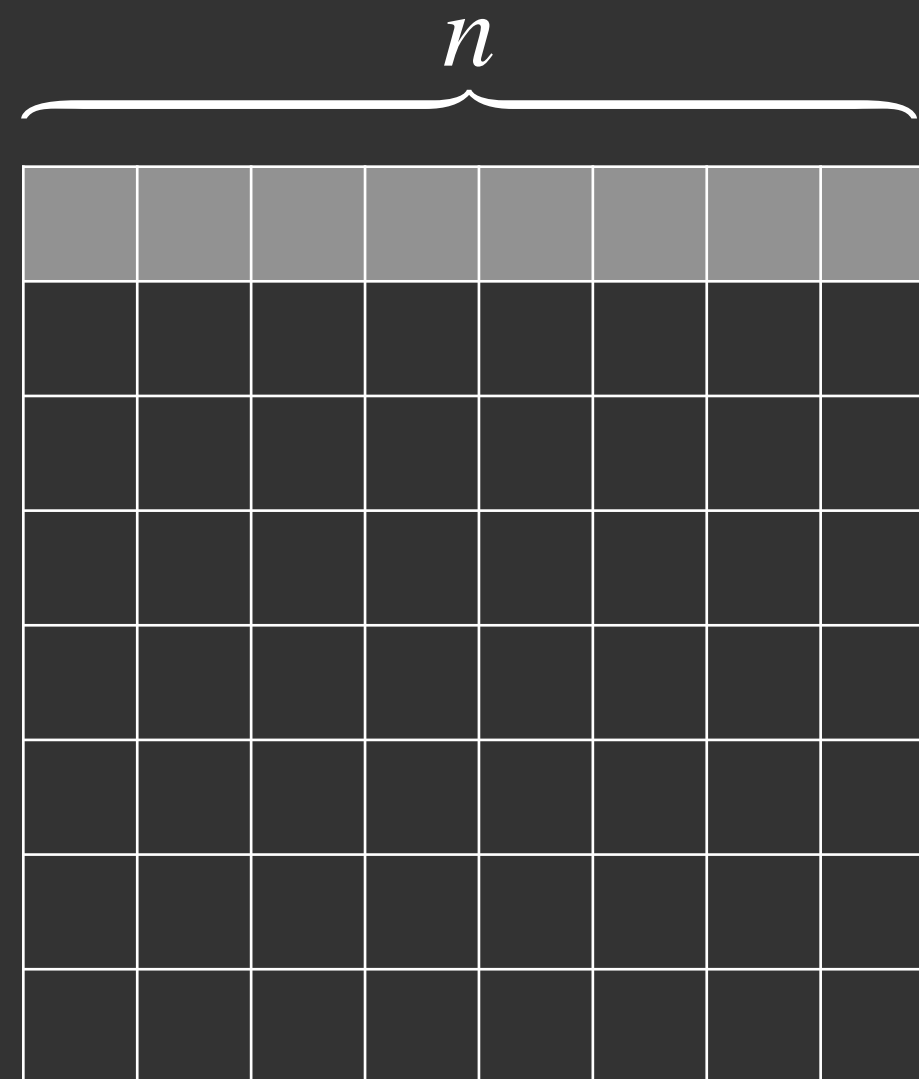
# our first proof (by construction)

## Theorem

For all integers  $n$ , if  $n$  is even, then  $n^2$  is even.



- If possible, it's helpful to draw some pics



- an integer  $n$  is called **even** if there is an integer  $k$  where  $n = 2k$

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