

Computing the rank of a matrix: method of bordering minors

- Look for a non-zero minor of order **1**.
 - If it does not exist, we are done and $rank = 0$
 - If it exists, $rank \geq 1$ and we continue.
- Look for a non-zero minor of order **2**, adding a row and a column to the non-zero minor from the previous step.
 - If it does not exist, we are done and $rank = 1$
 - If it exists, $rank \geq 2$ and we continue.
- Look for a non-zero minor of order **3**, adding a row and a column to the non-zero minor from the previous step.
 - If it does not exist, we are done and $rank = 2$
 - If it exists, $rank \geq 3$ and we continue.

In general at the k-th step:

- Look for a non-zero minor of order **k**, adding a row and a column to the non-zero minor from the previous step.
 - If it does not exist, we are done: $rank = k - 1$
 - If it exists, $rank \geq k$ and we continue.

It ends when we have NOT found a non-zero minor or there are no more rows or columns to add.

