MATH 240 - Rank of a matrix

Definition Let A be a matrix. The rank of A is rankA = dimColA
Proposition If two matrices are row equivalent, then they have the same row space.

Theorem Let A be a matrix. rankA = dimColA = dimRowA

If A is an mxn matrix then rankA = dimColA = dimRowA <= min(m, n)

Theorem *the rank-nullity theorem*. Let A be an mxn matrix. Then rankA + dimNulA = n