

Lecture 03: Echelon Form

echelon = triangular

& more precise

determine whether a matrix is in echelon form

↳ look at leading entry in each row

3 Conditions

1. rows with all zeros are below all other rows
2. each leading entry of a row is in a column to the right of the leading entry above it
3. All entries in a column below a leading entry are zeros

Reduced Echelon Form

more strict than echelon
make solving equations even easier
add 2 more conditions

4. The leading entry of each row is 1
5. Each leading 1 is the only non-zero entry in its column

Transformations

- can create many different echelon forms
- only one unique reduced echelon form for a matrix

