Jan 26 Inverses

Watch 3blue1brown video on inverses Tuesday office hours is extended by an hour

3.3 Inverses

- A linear transfrmation in $\mathbb{R}^2$ is equal to its inverse if equal to its own inverse.
- A square matrix A is invertible if there exists B such that $AB = I_n$.
- Give more examples of inverses we can figure out geometrically.
  - scaling
  - shear
- Properties of inverses. Assume A, B invertible, then
  - $(A^{-1})^{-1} = A$
  - $(AB)^{-1} = B^{-1}A^{-1}$
  - If $AC = AD$ then $C = D$.
- Derive method for computing. Explain both matrix multiplicatin version and linear map version.
- Do some basis examples.
- Give 2d formula