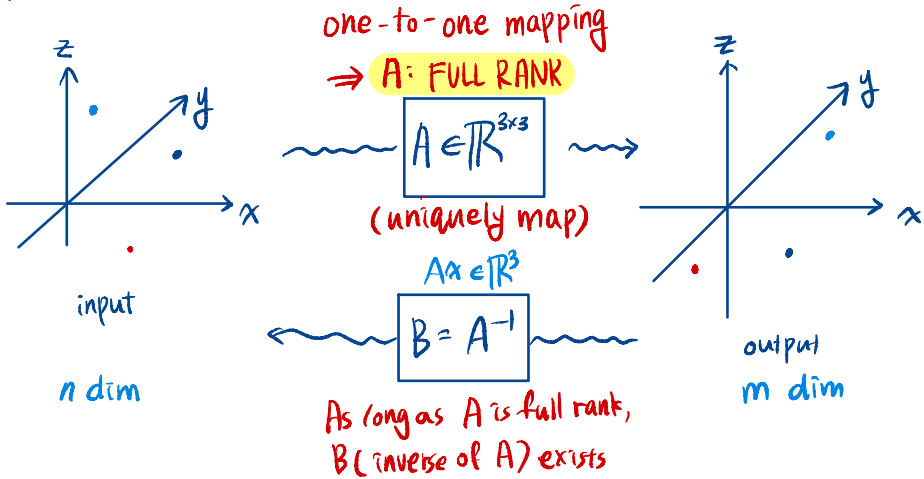


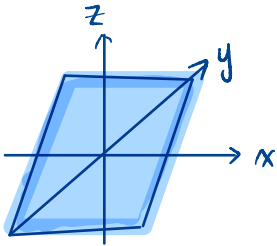
# Geometrical Interpretation

## FULL RANK

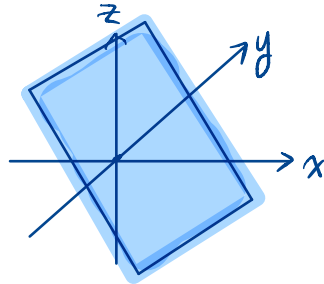
$A \in \mathbb{R}^{m \times n}$   $A(x) \in \mathbb{R}^m$  (think of matrix  $A$  as a function)  
 $x \in \mathbb{R}^n$



음? 같은 x인데  
A만 다르면 이야기하는건가...?  
다시 들어야 함...



$A \in \mathbb{R}^{3 \times 3}$   
 $A: \text{Rank 2}$



- exists a 2 dimensional subspace that is specific to matrix  $A$

- this subspace must pass through the origin.

- this subspace also pass through the origin.