**Source**:

# 1 | **intro**

## 1.1 | **speaking is important**

## 1.2 | **tutorial: probably tuesdays and thursdays at lunch**

# 2 | **isomorphisms**

## 2.1 | **an invertible / bijective map from one vetorspace to another**

## 2.2 | **an operator (map from a vector space to itself) is bijective iff it is surjective or injective**

# 3 | **3D Exercises**

## 3.1 | **Axler3D.3**

### 3.1.1 | **suppose $V$ is finite-dimensional, $U$ is a suspace of $V$, and $S \in \mathcal{L}(U, V)$. Prove there exists an invertible operator $T \in \mathcal{L}(V)$ s.t. $Tu = Su$ for every $u \in U$ iff $S$ is surjective**