## LADR 3B

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## Null Spaces and Ranges

3.12 Definition: null space,  $\operatorname{null} T$ 

For  $T \in \mathcal{L}(V, W)$ , null  $T = \{v \in V : Tv = 0\}$ 

3.15 Definition: injective

A function  $T:V\to W$  is injective if Tu=