

## 1 | #definition null space, kernel, null $T$

**def**

For  $T \in \mathcal{L}(V, W)$ , the *null space* of  $T$ , denoted  $\text{null } T$ , is the subset of  $V$  consisting of those vectors that  $T$  maps to 0:

$$\text{null } T = \{v \in V : Tv = 0\}$$

### 1.1 | Properties

#### 1.1.1 | 0 is always in $\text{null } T$