Source:

1 | **Definition**

#definition Axler3.2 Linear Map #aka linear transformation A *linear map* from V to W is a function $T : V \rightarrow W$ with the following properties:

1.1 | **Additivity**

$$T(u + v) = Tu + Tv \forall u, v \in V$$

1.2 | **Homogenity**

$$T(\lambda v) = \lambda(Tv) \forall \lambda \in \mathbb{F}, v \in V$$