



Linear Functions

1 Why

Lots of things are (approximately) linear

2 Definition

Let (V_1, F) and (V_2, F) be two vector spaces over the same field.

Let $f : V_1 \rightarrow V_2$. We say that f is **linear** if

$$f(au + bv) = af(u) + bf(v)$$

for all $a, b \in F$ and $u, v \in V_1$.