Source: [KBe20math530refVectorSpace]

1 | #definition span

The set of all linear combinations of a list of vectors $v_1, ..., v_m$ in V is called the span of $v_1, ..., v_m$, denoted span$(v_1, ..., v_m)$:

$$\text{span}(v_1, ..., v_m) = a_1 v_1 + ... + a_m v_m | a_1, ..., a_m \in F$$

And the span of an empty list $()$ is 0

2 | Properties

- The span is the smallest containing subspace
    - The span of a list of vectors in V is the smallest subspace of V containing all the vectors in the list.