

$$\text{split } \mathbb{1} \in \underbrace{\mathcal{H}^0}_{\mathbb{1}} \mathbb{K} = \mathcal{H}^0 \mathbb{k}$$

$$\mathbb{K} \underbrace{\mathcal{H}^0}_{\mathbb{1}} \mathbb{K} = \mathbb{K} \underbrace{\mathcal{H}^0}_{\mathbb{1}} \mathbb{k} \in \mathcal{H}^0 \text{ fin } G\text{-set}$$

$$\mathcal{L} : \mathcal{V} \in \mathcal{H} \times \mathbb{K} \underbrace{\mathcal{H}^0}_{\mathbb{1}} \mathbb{K} \xrightarrow[\text{act}]{\times} \mathbb{K} \underbrace{\mathcal{H}^0}_{\mathbb{1}} \mathbb{K} \ni \mathcal{L} \mathcal{V}$$

$$\text{free } \mathbb{K} \underbrace{\mathcal{H}^0}_{\mathbb{1}} \mathbb{k} \subset \mathbb{K} \underbrace{\mathcal{H}^0}_{\mathbb{1}} \mathbb{K} \in \mathcal{H}^0$$

$$\# \mathbb{K} \underbrace{\mathcal{H}^0}_{\mathbb{1}} \mathbb{k} \leq \dim_{\mathbb{K}} \mathbb{K} \underbrace{\mathcal{H}^0}_{\mathbb{1}} \mathbb{K} = \dim_{\mathbb{K}} \mathbb{1}$$