

Problem. Give an elegant description of the category of A^w spaces and maps between them.

Motivating Example. B is the category whose objects are $\{b_n : n \in \mathbb{N}\}$, with monoidal structure

$$b_n \otimes b_m := b_{n+m} \text{ and morphisms}$$

$$\text{mor}(b_n, b_m) = \text{Hom}(F_m, F_n)$$

where F_n is the free group on n letters.

A^u is a diagram for B in Vect .