

Definition (Product operator \otimes). For two maps $h_1 : F_1 \rightarrow \mathcal{A}R_1$ and $h_2 : F_2 \rightarrow \mathcal{A}R_2$, define

$$h_1 \otimes h_2 : (F_1 \times F_2) \rightarrow \mathcal{A}(R_1 \times R_2),$$

$$\langle f_1, f_2 \rangle \mapsto h_1(f_1) \times h_2(f_2),$$

where \times is the product of two antichains.