

Definition (Coproduct operator \oplus). For $h_1, h_2 : F \rightarrow \mathcal{A}R$, define

$$h_1 \oplus h_2 : F \rightarrow \mathcal{A}R,$$

$$f \mapsto \text{Min}_{\leq_R} (h_1(f) \cup h_2(f)).$$