

**Definition** (Coproduct operator  $\oplus$ )

For  $h_1, h_2 : \mathbf{F} \rightarrow \mathcal{AR}$ , define

$$h_1 \oplus h_2 : \mathbf{F} \rightarrow \mathcal{AR},$$

$$f \mapsto \underset{\leq_{\mathbf{R}}}{\text{Min}} (h_1(f) \cup h_2(f)).$$