

**Definition** (Feasible set of a design problem). We define the *feasible set*  $K_{\mathbf{d}}$  of a design problem  $\mathbf{d} : \textcolor{green}{F}^{\text{op}} \times \textcolor{red}{R} \rightarrow_{\mathbf{Pos}} \mathbf{Bool}$  as the subset of  $\textcolor{green}{F}^{\text{op}} \times \textcolor{red}{R}$  for which  $\mathbf{d}$  is the *indicator function*, that is

$$K_{\mathbf{d}} = \{\langle \textcolor{green}{f}^*, \textcolor{red}{r} \rangle \in \textcolor{green}{F}^{\text{op}} \times \textcolor{red}{R} \mid \mathbf{d}(\textcolor{green}{f}^*, \textcolor{red}{r}) = \top\}.$$