

Lemma. Given $\mathbf{f}_1, \mathbf{f}_2, \mathbf{f}_3, \mathbf{f}_4 \in \text{Hom}_{\text{DP}}(\mathbf{A}; \mathbf{B})$ one has:

$$\frac{\mathbf{f}_1 \leq_{\text{DP}} \mathbf{f}_2 \quad \mathbf{f}_3 \leq_{\text{DP}} \mathbf{f}_4}{\mathbf{f}_1 \vee \mathbf{f}_3 \leq_{\text{DP}} \mathbf{f}_2 \vee \mathbf{f}_4}$$