$$\preceq_{\mathbf{P+Q}} : (\mathbf{P} + \mathbf{Q}) \times (\mathbf{P} + \mathbf{Q}) \to \mathbf{Bool}$$

$$\langle 1, p_1 \rangle, \langle 1, p_2 \rangle \mapsto (p_1 \preceq_{\mathbf{P}} p_2)$$

$$\langle 2, q \rangle, \langle 1, q \rangle \mapsto \bot$$

$$\langle 1, p \rangle, \langle 2, q \rangle \mapsto \top$$

$$\langle 2, q_1 \rangle, \langle 2, q_2 \rangle \mapsto (q_1 \preceq_{\mathbf{Q}} q_2).$$