

**Definition** (Antitone map). An *antitone map* between two posets  $\langle \mathbf{P}, \leq_{\mathbf{P}} \rangle$  and  $\langle \mathbf{Q}, \leq_{\mathbf{Q}} \rangle$  is a map  $f$  that reverses the ordering, in the sense that

$$\frac{p_1 \leq_{\mathbf{P}} p_2}{f(p_1) \geq_{\mathbf{Q}} f(p_2)}$$