

**Definition.** The *opposite* of a poset  $\langle \mathbf{P}, \leq_{\mathbf{P}} \rangle$  is the poset denoted as  $\langle \mathbf{P}^{\text{op}}, \leq_{\mathbf{P}^{\text{op}}} \rangle$  that has the same elements as  $\mathbf{P}$  and the reverse ordering (??). For a given  $p \in \mathbf{P}$ , we use  $p^*$  to represent its corresponding copy in  $\mathbf{P}^{\text{op}}$ ; note that  $p$  and  $p^*$  belong to distinct posets. Reversing the order means that, for all  $p, q \in \mathbf{P}$ ,

$$\frac{p \leq_{\mathbf{P}} q}{q^* \leq_{\mathbf{P}^{\text{op}}} p^*}$$