

Definition (Downward closed set). An upper set \mathbf{A} is *downward-closed* in a poset \mathbf{P} if

$$\mathbf{A} = \uparrow \text{Min } \mathbf{A}.$$

The set of downward-closed upper sets of \mathbf{P} is denoted $\overline{\text{UpperSets}\mathbf{P}}$.