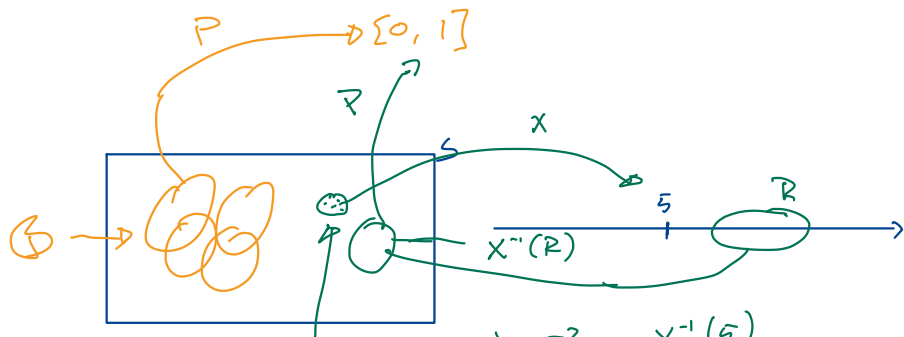


Sketch of  $P$ ,  $S$ ,  $\mathcal{B}$ ,  $X$  etc

$$\{s \in S : X(s) = 5\} = X^{-1}(5)$$

$$P(X=5) = P(\{s \in S : X(s) = 5\})$$

⚡  
This is only defined if  $\{s \in S : X(s) = 5\} \in \mathcal{B}$