

# Definition

- Let  $\Pi$  be a program encoding a transition relation  $T \subseteq S \times S$ .
- Let  $\varphi$  be an assertion defining a state property  $P \subseteq S$ .

The *strongest postcondition*  $\mathbf{sp}(\Pi, \varphi)$  is any assertion defining the set of states:

$$T[P] = \{s \in S : \exists s_0 \in P : (s_0, s) \in T\}.$$