Reducing between Problems

Suppose you have two decision problems, π and π' .

Suppose $\pi' \in \mathcal{P}$, and that \mathcal{A} is an algorithm to solve π' .

We would like to use \mathcal{A} to help solve π in polynomial time.

To do this, we try to make the inputs to π look like inputs to π' . What else do we need?