

 $\mathcal{G}^{\mathcal{A}}$ 
$$\left[ \begin{array}{l} (n, p, q) \leftarrow \text{Gen} \\ p_*, q_* \leftarrow \mathcal{A}(n) \\ \mathbf{return} \ [p \stackrel{?}{=} p_*] \vee [p \stackrel{?}{=} q_*] \end{array} \right]$$