Judge J

sample uniform $x \in \{0,1\}^k$
$y := f(x)$

▶ x'
return $y \stackrel{?}{=} f(x')$

Inverter I

▶ y
$\ell := 0$
while not $M(1^\ell, \epsilon, y)$**:**
  $\ell := \ell + 1$
$x' := \epsilon$
for $i = 1 \ldots \ell$**:**
  if $M(1^\ell, x' \| 0, y)$ **then**
    $x' := x' \| 0$
  else
    $x' := x' \| 1$