Judge J

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

▶ $I.x$
return $y \stackrel{?}{=} f(I.x)$

Inverter I

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