Judge J	**Inverter** I
sample primes $p, q \in [2^k, 2^{k+1})$ $n := pq$ sample prime $e \in \mathbb{Z}^*_{\phi(n)}$ sample $x \in \mathbb{Z}_n$ $y := x^e$ ▶ $I.x$ **return** $x \stackrel{?}{=} I.x$	▶ $J.n, J.e, J.y$ compute x