$\mathbf{Judge}\ J$	Inverter I
sample uniform $\theta \in \mathbb{Z}_{p_k-1}$	
$y := g_k^{\theta} \in \mathbb{Z}_{p_k}^*$	▶ <i>J.y</i>
▶ <i>I</i> .θ	$ ightharpoonup J.y$ compute θ
$\mathbf{return}\ y \stackrel{?}{=} g_k^{I.\theta}$	