

$$\begin{array}{ccc}
 \mathbb{N} \times \mathbb{N} & \xrightarrow{p} & \mathbb{N} \\
 (e,e) \downarrow & & \downarrow e \\
 \mathbb{N} \times \mathbb{N} & \xrightarrow{p} & \mathbb{N}
 \end{array}$$

$$\begin{array}{ccc}
 (a,b) & \mapsto & a+b \\
 \downarrow & & \downarrow \\
 (a^n,b^n) & \mapsto & a^n+b^n=(a+b)^n
 \end{array}$$