

$$\begin{array}{ccc}
P(\alpha) & \xrightarrow{\times_p P(\beta)} & P(\alpha \times \beta) \\
p_\alpha^{-1} \updownarrow p_\alpha & & p_\beta^{-1} \updownarrow p_\beta \\
\alpha & \xrightarrow{\times \beta} & \beta
\end{array}$$

$$\begin{aligned}
p_\beta \circ \times \beta &= \\
p_\beta \circ \times \beta \circ p_\alpha^{-1} \circ p_\alpha &= \\
&\times_p P(\beta) \circ p_\alpha \wedge \\
p_\alpha \text{ epic} &\implies \\
p_\beta \circ \times \beta \circ p_\alpha^{-1} &= \times_p P(\beta)
\end{aligned}$$


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Product of presentation of endomaps is presentation of product of endomaps