























1

$$\mathbb{Z}\{1\}$$

$$\iota_3 \xrightarrow{\beta^1} \beta \iota_3$$

$$\mathbb{Z}/3\{\beta\iota_3\}$$

$$\begin{array}{ccccc}
& & \beta^1 & & \\
& \nearrow & & \searrow & \\
\iota_3 \beta \iota_3 & & P^1 \beta \iota_3 & & \beta P^1 \beta \iota_3 \\
& & (\beta \iota_3)^2 & & \\
& \nwarrow & & \nearrow & \\
P^1 \iota_3 & & \beta P^1 \iota_3 & & \\
& \nwarrow & & \nearrow & \\
& & \beta^1 & &
\end{array}$$

$$\begin{array}{ccc}
\mathbb{Z}/3\{\beta(\iota_3 \beta \iota_3)\} & & \mathbb{Z}/3\{\beta P^1 \beta \iota_3\} \\
\mathbb{Z}/3\{\beta P^1 \iota_3\} & &
\end{array}$$











