

$$\begin{array}{ccccccccccc}
\dots & \xrightarrow{d_3} & P_2 & \xrightarrow{d_2} & P_1 & \xrightarrow{d_1} & P_0 & \xrightarrow{d_0} & \mathbb{Z} & \longrightarrow & 0 \\
& & \searrow h_2 & & \searrow h_1 & & \searrow h_0 & & \searrow \text{id}_{\mathbb{Z}} & & \\
& & \alpha_2 \downarrow \beta_2 & & \alpha_1 \downarrow \beta_1 & & \alpha_0 \downarrow \beta_0 & & & & \\
\dots & \xrightarrow{\quad} & Q_2 & \xrightarrow{d_2} & Q_1 & \xrightarrow{d_1} & Q_0 & \xrightarrow{d_0} & \mathbb{Z} & \longrightarrow & 0
\end{array}$$