$$
\begin{array}{ccccccccc}
0 & \longrightarrow & \mathbb{Z} & \xrightarrow{\ \cdot 2\ } & \mathbb{Z} & \longrightarrow & \mathbb{Z}/(2) & \longrightarrow & 0 \\
& & \downarrow{\scriptstyle \mathbb{Z}/(2)\otimes_{\mathbb{Z}}\cdot} & & & & & & \\
?? & \longrightarrow & \mathbb{Z}/(2) & \xrightarrow{\ \cdot 2^{*}\ } & \mathbb{Z}/(2) & \longrightarrow & \mathbb{Z}/(2)\otimes_{\mathbb{Z}}\mathbb{Z}/(2) & \longrightarrow & 0
\end{array}
$$