

$$0 \longrightarrow \mathbb{Z}_p \longrightarrow \mathbb{Q}_p \longrightarrow \mathbb{Q}_p/\mathbb{Z}_p \longrightarrow 0$$

The diagram illustrates a short exact sequence of abelian groups. The top row shows the sequence: $0 \rightarrow \mathbb{Z}_p \rightarrow \mathbb{Q}_p \rightarrow \mathbb{Q}_p/\mathbb{Z}_p \rightarrow 0$. A curved arrow points from the quotient group $\mathbb{Q}_p/\mathbb{Z}_p$ back to \mathbb{Z}_p , indicating an isomorphism between the quotient and the kernel of the map from \mathbb{Q}_p to $\mathbb{Q}_p/\mathbb{Z}_p$.