$$\overbrace{\sqrt[n]{\mathbb{Z}}}^{-1} = \frac{\sqrt[n]{\mathbb{R}} \in \mathbb{L}}{\underbrace{\sqrt[n]{\mathbb{Z}}}^{*} \subset \mathbb{Z}} = \bar{\sqrt}[n]{\mathbb{Z}} = \sqrt[n]{\mathbb{Z}}$$