

$$\begin{aligned} \mathbb{H} \triangleleft \mathbb{I} &= \mathbb{I} \\ \mathbb{H} \triangleleft \mathbb{I} &\xleftarrow{d_0} \mathbb{H} \triangleleft \mathbb{I} \\ \mathbb{H} \triangleleft \mathbb{I} &\xleftarrow{d_0} \mathbb{I} \end{aligned}$$

$$d(\mathbb{I}) = \mathbb{I} - d\mathbb{I} = \mathbb{I} \times \mathbb{I} - \mathbb{I}$$