

$$\underbrace{-i-j}_{\text{unit}} {}^n\mathbb{C}_n^\circlearrowleft \underbrace{i+j} \xrightarrow{j} {}^n\mathbb{H}_n^\circlearrowright$$

$$\begin{aligned}
\lrcorner \in {}^n\mathbb{C}_n^\circlearrowleft &\Rightarrow \underbrace{-i-j}_{\lrcorner} \lrcorner \underbrace{i+j}_{i} \underbrace{i}_{\overbrace{-i-j}^*} \lrcorner \underbrace{i+j}_{=j} = \underbrace{-i-j}_{\lrcorner} \lrcorner \underbrace{i+j}_{i} \underbrace{i}_{\overbrace{-i-j}^*} \lrcorner \underbrace{i+j}_{=j} \\
&= \underbrace{-i-j}_{\lrcorner} \lrcorner j \lrcorner \underbrace{i+j}_{i} = \underbrace{-i-j}_{\lrcorner} \lrcorner \underbrace{\lrcorner \lrcorner^t}_{=1} j \underbrace{i+j}_{i} = \underbrace{-i-j}_{\lrcorner} j \underbrace{i+j}_{i} = i \\
&\begin{cases} {}^n\mathbb{C}_n^\circlearrowleft \times i = 0 \\ i + j i - i - j = j \end{cases} \Rightarrow \underbrace{-i-j}_{\lrcorner} {}^n\mathbb{C}_n^\circlearrowleft \underbrace{i+j}_{i} \times j = 0
\end{aligned}$$