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$$H(3,\mathbb{C}) = N(3,\mathbb{C})$$

 Definition.

$$H(3,\mathbb{C}) := \left\{ \left[\begin{array}{ccc} 1 & a & b \\ 0 & 1 & c \\ 0 & 0 & 1 \end{array} \right] \middle| a,b,c \in \mathbb{C} \right\}$$

Proposition:

$$Z(H(3,\mathbb{C})) = \left\{ \left[\begin{array}{ccc} 1 & 0 & b \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{array} \right] \middle| b \in \mathbb{C} \right\} \cong \mathbb{C}$$
$$\left[\begin{array}{ccc} 1 & 0 & b \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{array} \right] \mapsto b$$

Current note has 0 direct children and 0 total descendants.

- [squishy](#)
 - [Heisenberg.group](#)
 - $H(3,\mathbb{C})$

And it has 2 siblings.

- [squishy](#)
 - [Heisenberg.group](#)
 - $H(3,\mathbb{C})$
 - $H(3,\mathbb{R}) = N(3,\mathbb{R})$