Funktional-Algebra

$$U = \mathbb{N}$$

$$\text{1-stellig } \mathbb{N} \xrightarrow{F_1} \mathbb{N}: \quad F_1 n = n + 1 \text{ Nachfolger}$$

$$\mathcal{G} F_1 = \frac{n{:}n+}{n \in \mathbb{N}}$$

$$\text{0-stellig } O = \underset{-}{\mathbb{N}} = (0)$$

$$\text{Ableitung } 0|1|\cdot\cdot|n$$

$$\mathbb{N}_n = 0|n$$

$$0|1|2|\cdot\cdot|n \text{ Ableitung von n in n Schritten}$$

$$\hat{0} = \bar{0} = \mathbb{N}$$

$$0 \in V \overset{\text{abg}}{\subset} \mathbb{N} \underset{\text{Beh}}{\Longrightarrow} V = \mathbb{N}$$

$$0 \in V$$

$$n \in V: \quad \underbrace{n{:}n+} \in \mathcal{G} F_1 \underset{\text{abg}}{\Longrightarrow} n + 1 \in V$$

$$\underset{\text{Ind}}{\Longrightarrow} V = \mathbb{N}$$

$$b \in \mathbb{N} \xrightarrow{\sigma_a} \mathbb{N} \ni a + b \begin{cases} \sigma_a(0) = a \\ \sigma_a(b+) = \sigma_a(b) + \end{cases} \qquad \begin{cases} \widetilde{0} = a \\ \widetilde{f}_1 \begin{bmatrix} b \\ c \end{bmatrix} = c+ \end{cases}$$

$$b \in \mathbb{N} \xrightarrow{\pi_a} \mathbb{N} \ni a \cdot b \begin{cases} \pi_a(0) = 0 \\ \pi_a(b+) = \sigma_a(\pi_a(b)) \end{cases} \qquad \begin{cases} \widetilde{0} = 0 \\ \widetilde{f}_1 \begin{bmatrix} b \\ c \end{bmatrix} = \sigma_a(c) \end{cases}$$