$$A \in {}_d\mathbb{K}^d$$

$$\ulcorner A \urcorner < 1 \Rightarrow \overbrace{I - A}^{-1} = \sum_{n}^{\mathbb{N}} A^n$$

$$X \in {}_d\mathbb{K}^d \xrightarrow{F_A} {}_d\mathbb{K}^d \ni {}^X F_A = I + AX$$

$$F_A \ \text{contr}_{\ulcorner A \urcorner}$$

$$\ulcorner {}^X F_A - {}^Y F_A \urcorner = \ulcorner \underbrace{I + AX} - \underbrace{I + AY} \urcorner = \ulcorner AX - AY \urcorner = \ulcorner A \underbrace{X - Y} \urcorner \leqslant= \ulcorner A \urcorner \ulcorner X - Y \urcorner$$

$${}_d\mathbb{K}^d \text{ voll } \underset{\text{Ban}}{\Longrightarrow} \bigvee_{\text{eind}} {}_d\mathbb{K}^d \ni B = {}^B F_A = I + AB$$

$$B = \overbrace{I - A}^{-1}$$

$$\underbrace{I - A} B = B - AB = I$$

$${}^I F_A^n = I + A + \cdot\cdot + A^n$$

$${}^I F_A^0 = {}^I\text{id} = I$$

$${}^I F_A^{n+1} = I + A\,{}^I F_A^n = I + A + \cdot\cdot + A^n \underset{\text{ind}}{=} I + A \underbrace{I + A + \cdot\cdot + A^n} = I + A + A^2 + \cdot\cdot + A^{n+1}$$

$$I + A + \cdot\cdot + A^n = {}^I F_A^n \rightsquigarrow B = \overbrace{I - A}^{-1}$$