> Info
>
> This note, that was found here, as a part of a collection
> is written (completely with human hands) by Rupadarshi Ray,
> was created on January 26, 2026 4:26:22 PM,
> was last modified on September 6, 2026 1:47:59 AM, and
> was exported on September 7, 2026 2:50:31 PM.

Unit ball $D^n \subset \mathbb{C}^n$

Let

$$P_a(z) := \begin{cases} 0 & a = 0 \\ \frac{\langle z, a \rangle}{|| a ||^2} a & a \neq 0 \end{cases}$$

Then

$$\begin{aligned} \varphi_a : D^n &\to D^n \\ z &\mapsto \frac{1}{1 - \langle z, a \rangle} \left(a - P_a(z) - \frac{1}{\sqrt{1 - || a ||^2}} (\mathsf{Id} - P_a)(z) \right) \end{aligned}$$

Current note has 0 direct children and 0 total descendants.

- squishy
  - $\mathbb{C}^n$
    - Unit ball $D^n \subset \mathbb{C}^n$

And it has 3 siblings.

- squishy
  - $\mathbb{C}^n$
    - $GL(n, \mathbb{C}) \curvearrowright \mathbb{C}^n$
    - $S_n \curvearrowright \mathbb{C}^n \to \mathbb{C}^n$
    - Unit ball $D^n \subset \mathbb{C}^n$