

$$f: \square \rightarrow \circ$$

$$C_1 = \{(x, y) \in \mathbb{R}^2 : \max\{|x|, |y|\} = 1\}$$

$$S_1 = \{x^2 + y^2 = 1\}$$

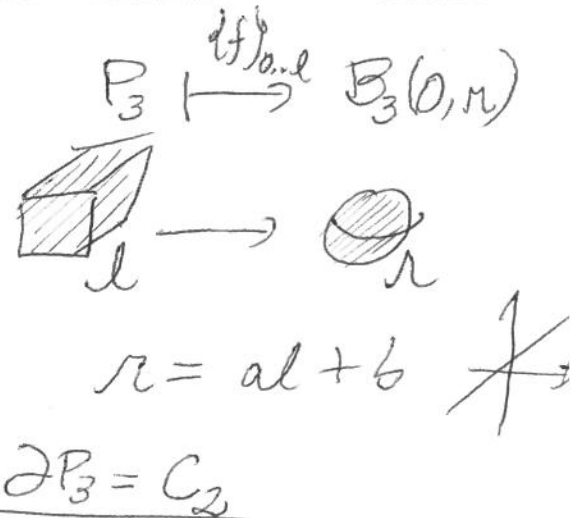
$$f(x, y) = \frac{(x, y)}{\sqrt{x^2 + y^2}}$$

$$f^{-1}: \circ \rightarrow \square$$

$$f(x, y) = \frac{(x, y)}{\max\{|x|, |y|\}}$$

$$f_{l, n}(x, y, z) = \frac{(x, y, z)}{\sqrt{x^2 + y^2 + z^2}} \quad C_2$$

$$f^{-1}(x, y, z) = \frac{(x, y, z)}{\max\{|x|, |y|, |z|\}} \quad S_2$$



$$f_{l, n-1}(x_1, \dots, x_n) = \frac{(x_1, \dots, x_n)}{\sqrt{\sum_{i=1}^n x_i^2}} \quad (a + b) \quad C_n \rightarrow S_n$$

$v \in \mathbb{R}^n$

$$f_{l, w}(v \in \mathbb{R}^w) = \frac{v}{\sqrt{\sum_{i=1}^w x_i^2}} \quad (a + b) \quad C^w \rightarrow S^w$$

$$\mathbb{R}^w \subset \mathbb{R}^J \subset A$$

\downarrow
 \emptyset

$$C_0 = S_0$$

$$-i \quad i \rightarrow -i \quad i$$

$$A = \left\{ \left[\begin{array}{l} \varphi: J \rightarrow \mathbb{R} \quad v \in \mathbb{R}^n \\ \alpha_n \in \mathbb{R}^w \quad a + bi \in \mathbb{C} \end{array} \right] \right\}$$

$$C(A) = \{ \dots \max\{ \dots \} = 1 \}$$

$$S(A) = \{ \sum \dots^2 = 1 \}$$

$f(A, |\cdot|_n, |\cdot|_\infty)$