ℂ

$$A^B = \{ f : B \to A \}$$

$$\mathbb{R}^{\{1,2\}} = \{ f : \{1,2\} \to \mathbb{R} \}$$

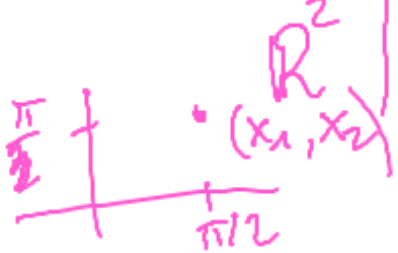
$$\downarrow \varphi$$

$$\mathbb{R}^2 = \{ (x_1, x_2) : x_1, x_2 \in \mathbb{R} \}$$

$$f(1) = x_1$$

$$f(2) = x_2$$

$$f = (x_1, x_2)$$

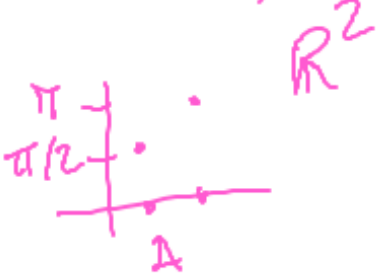


$f : A \to B$

$$\text{graph}(f) = \{ (a, f(a)) : a \in A \}$$

$$A = \{1, 2\}$$

$$\text{graph}(f) = \{ (1, f(1)), (2, f(2)) \}$$



$$A \times B \times C \quad \overline{\ni} \quad \{(a,b,c) : a \in A, b \in B, c \in C\}$$

$$\| \qquad \ni \quad (a,b,c)$$

$$(A \times B) \times C \quad \ni \quad ((a,b),c)$$

$$\| \qquad\qquad \|$$

$$A \times (B \times C) \ni \quad (a,(b,c))$$

Körper $(K, +, \cdot)$

Skalare

$$\begin{cases} K = \{ f : A \to \mathbb{R} : \cancel{A \subseteq \mathbb{R}} \}, & A \subseteq \mathbb{R} \\ (f+g)(x) := f(x) + g(x) \\ (f \cdot g)(x) := f(x) \cdot g(x) \end{cases}$$

$\mathbb{Z}_2$

$+$	0	1
0	0	1
1	1	0

$\cdot$	0	1
0	0	0
1	0	1

$$(a+b)+c = a+(b+c)$$

$f: A \to B$

$\cup \quad \cup$

$a \mapsto f(a)$ ✠

$x \longmapsto \sin(\sqrt{x})$

$A = \{1,2,3\}$

$B = \{1,\dots,5\}$

$5 \cdot 5 \cdot 5 = 125$