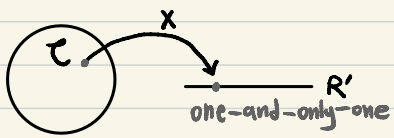
1.5 Random Variables
확률변수
↳ deterministic

Def 1.5.1

X: a real-valued function

defined on the sample space



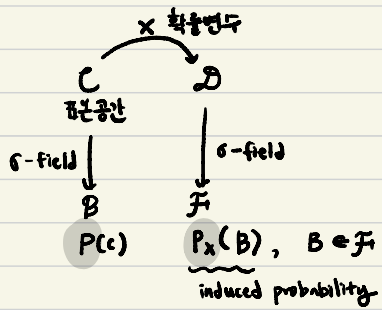
$X(c) = k \quad c \subset \mathcal{C}$

표본공간의 집합

$\mathcal{D} = \{x : x = X(c),\ c \in \mathcal{C}\}$ ↓ domain. range(space)

$\mathcal{C} \xrightarrow{X} \mathcal{D}$

$\mathcal{D}$: { countable → discrete r.v. 이산형 서로 떨어져 있는
interval of real #s
→ continuous r.v.
연속형 확률변수



$P_X(B) = P(c \in \mathcal{C} : X(c) \in \mathcal{B}),\ B \in \mathcal{F}$

cf.

$\mathcal{D}$: discrete $= \{d_1, \cdots, d_m\}$

$P_X(d_1) = P(X = d_i) = P(c : X(c) = d_i)$

: probability mass (density) function p.m.f p.d.f