# Probability and statistic set 2

Wiktor Hamberger

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## 1 Theory

$\Sigma$ is $\sigma$-field when:

1. $\Omega \in \Sigma$,
2. $A \in \Sigma \Longrightarrow A^C \in \Sigma$,
3. $A_i \in \Sigma, (i = 1, 2, \ldots) \Longrightarrow \bigcup_{i=1}^{\infty} A_i \in \Sigma$.

## 2 Exercise 3.

$$\Omega = \{1, 2, 3, 4, 5\}, S = \{1, 4\}, \Sigma = \{\emptyset, S = \{1, 4\}, \{2, 3, 5\}, \Omega\}$$