

Notes on Probability Theory

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1 Main

Definition 1.1. A **probability space** is a triple (Ω, \mathcal{F}, P) where Ω is the **sample space**, \mathcal{F} is a σ -algebra of Ω (**events**) and $P : \mathcal{F} \rightarrow [0, 1]$ is the **probability function**.

Definition 1.2. A σ -**algebra** of set X is a collection of subsets of X closed under complementation and *countable* union.

Remark 1.1.