Measures and Integration

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Some intuition: A measure on a set X is a rule that assigns in some sense the "size" of a subset of X

Ring: A nonempty collection of subsets of R of a set X is a ring iff R is closed under union and difference. In other words, R is a ring iff for all $E, F \in R$, $E \cup F \in R$, $E \setminus F \in R$

Algebra:If a ring R contains the set X itself, we call R an algebra.

Ring Generated by X: The smallest ring that contains X is called the **ring generated by X**.