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## atom (measure theory)

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Let  $(X, \mathcal{B}, \mu)$  be a measure space. A set  $A \in \mathcal{B}$  is called an **atom** if  $A$  has positive measure and contains no measurable subsets  $B \subset A$  such that  $0 < \mu(B) < \mu(A)$ .

An equivalent definition can be:  $A$  has positive measure and for every measurable subset  $B \subset A$ , either  $\mu(B) = 0$  or  $\mu(A - B) = 0$ .