

**Question**

$A$  is a measurable set, and  $S$  is a subset of  $A$  of measure zero. Is  $A - S$  necessarily measurable? Justify your assertion.

**Answer**

$A \in \mathcal{M}$

Since  $m^*(S) = 0$ ,  $S \in \mathcal{M}$

Therefore  $A - S \in \mathcal{M}$