5. Consider a Riesz integral $l$ on a compact metric space. Prove that for disjoint closed sets $A_1$ and $A_2$ the upper Riemann measure is additive, i.e. the upper integral of $\chi_{A_1 \cup A_2}$ is equal to $\chi_{A_1} + \chi_{A_2}$.

6. Consider a Riesz integral $l$ on a compact metric space. Prove that if the one-point set $\{x\}$ is measurable and not a null-set then $x$ is an isolated point in $X$.

7. Let $I^2$ be the unit square and $l$ be a Riesz integral on $I^2$. Prove that for any $r > 0$ there exist a measurable partition of $I^2$ into rectangles of diameter $\leq r$.

   Hint: Use an argument similar to the one which proves measurability of balls.

8. Prove that no interval can be represented as the union of countably many null-sets with respect to the standard Riemann measure.

   An extra credit problem

2E. Consider a Riesz integral $l$ on a compact metric space. Prove that there are at most countably many points $x \in X$ such that the one-point set $\{x\}$ is not a null-set.

   Hint: Use problem N5.