

1. Carothers 16.73
2. Carothers 16.74
3. Carothers 16.75
4. Suppose $\mathcal{C} \subseteq \mathcal{P}(\mathbb{R})$ and $\sigma(\mathcal{C}) = \mathcal{B}$. Suppose also that $f : D \rightarrow \mathbb{R}$ where $D \subseteq \mathbb{R}$. Prove that f is measurable if and only if $f^{-1}(E)$ is measurable for every $E \in \mathcal{C}$.
5. Carothers 17.2
6. Carothers 17.3
7. Carothers 17.4
8. Carothers 17.8
9. Carothers 17.18
10. Carothers 17.21