1. Carothers 16.40
2. Carothers 16.42
3. Carothers 16.44
4. Carothers 16.45
5. Carothers 16.53
6. Carothers 16.58
7. Carothers 16.60
8. Carothers 16.64
9. Suppose $E \subseteq \mathbb{R}$. Prove that E is measurable if and only if for any $\epsilon > 0$ there is an open set G and a closed set F such that $F \subseteq E \subseteq G$ and $m^*(G \setminus F) < \epsilon$. (This is your text's definition of measurability.)
10. Revisit 16.28 using the full power of the theorems we've developed for Lebesgue measure. That is, try to come up with a tidy short proof that $m(\Delta_\alpha) = \alpha$.