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 $m(\Delta_\alpha) = \alpha$.