1. Carothers 18.4 [Sakti]
2. Carothers 18.6 [Max]
3. Carothers 18.9 [Lander]
4. Carothers 18.11 [Mason]
5. Carothers 18.16 [Jody]
6. Carothers 18.17 [Max]
7. Carothers 18.21 [Mason]
8. Carothers 18.22 [Jody]
9. [Lander]

   Suppose $f : \mathbb{R} \to [0, M]$ for some $M \geq 0$. Show that f is measurable if and only if

   $$\sup \left\{ \int_a^b \phi : \phi \text{ is simple and } \phi \leq f \right\} = \inf \left\{ \int_a^b \psi : \psi \text{ is simple and } \psi \geq f \right\}.$$

   Conclude that every Riemann integrable function is measurable.