REAL ANALYSIS
MATH 205B/H140B, HW#6

Chapter 14, exercises 6, 7, 8, 18, 19, 20, 24, 25, 27, and the following problem:

Problem 1.

Let us call a partition P of the interval $[0,1]$ "special" if it has a form

$$P = \{x_0, x_1, \ldots, x_{2^n}\}, \;\; x_i = \frac{i}{2^n}.$$

TRUE or FALSE: A bounded function $f : [0,1] \to \mathbb{R}$ is Riemann integrable if and only if

$$\inf_P U(f,P) = \sup_P L(f,P),$$

where both $\inf$ and $\sup$ are taken over all *special* partitions.