Complete problems 32.1, 32.6, 33.4, 33.7 (parts a and b), 33.8 (part a), 33.13, 34.11 and 34.12.

(In problem 32.1 you may use Exercise 1.3 without proof. In problem 32.6, for all \( n \), \( U_n = U(f, P_n) \) for some partition \( P_n \) of \([a, b]\) and \( L_n = L(f, Q_n) \) for some partition \( Q_n \) of \([a, b]\).)

Problem 34.11 is different in the second edition. The question now reads:

**Problem 34.11:** Suppose that the function \( f \) is continuous on \([a, b]\). Show that if \( \int_a^b f(x)^2 \, dx = 0 \), then \( f(x) = 0 \) for all \( x \in [a, b] \). Hint: See Theorem 33.4.