1. Ex. 5, 6, 9, Sec.7.2 *Cooper.*

2. Ex. 3, 4, 9, Sec. 7.3 *Cooper.*

3. Ex. 1, 2, 3. Sec. 7.5, *Cooper.*

4. The n-panel Trapezoid Rule, T_n for approximating $I = \int_a^b f(x)\, dx$ is

$$T_n = \frac{h}{2}(f_1 + 2f_2 + \ldots + 2f_{n-1} + f_n)$$

where $h = (b - a)/n$, $x_i = a + ih$, $i = 0, 1, \ldots, n$ and $f_i = f(x_i)$. Suppose f is continuous on $[a, b]$. Show that $\lim_{n \to \infty} T_n = I$ by showing that T_n is a Riemann sum for I. Hint: You have to manipulate the expression for T_n.