Homework Assignment for Week 11

1. Section 4.6: problems 12, 27, 67(a).
2. Section 4.8: Problems 79, 80, 84, 95, 103, 107, 109 127, 128.
3. Section 5.1: problem 22.
4. Section 5.2: problem 45.

   Hint: $\displaystyle\sum_{k=1}^{n} k^3 = \left(\frac{n(n+1)}{2}\right)^2$
5. Section 5.3: Read Table 5.6.
6. Section 5.3: problems 5, 13, 17, 49, 71, 73.
7. Section 5.3: problem 87: Optional (it will not appear in any exam). Do it if time permits. It partially (but not completely) answers why continuous functions are integrable. The assumption on f here is stronger than continuity, therefore it is easier to prove that f is integrable on $[a, b]$ under this assumption.