In Section 11.3, read from the beginning of Example 1 to the end of the section (including the proof of Theorem 9).

Do these problems:

p. 741 # 42, 48, 56 (explain your answers)

p. 754 # 14, 29, 70

Then use the integral test to decide whether the following series converge or diverge:

A) $\displaystyle\sum_{n=1}^{\infty} \frac{3n^2}{n^3+1}$

B) $\displaystyle\sum_{n=1}^{\infty} \frac{3n^2}{(n^3+1)^2}$

C) $\displaystyle\sum_{n=1}^{\infty} \frac{1}{\sqrt{n}(n+1)}$

D) $\displaystyle\sum_{n=2}^{\infty} \frac{1}{n(\ln n)^2}$