

Study Guide for Additional Topics

Important definitions. You should know the meanings of the following terms. (All of them are important, so none of them will be bold-faced.)

Term	Lecture	Reference
Indeterminate form	Lecture 28	§12.1 p. 398
Improper integral	Lecture 29	§12.4 p. 409
Infinite sequence	Lecture 30	§13.2 p. 432
Infinite series	Lecture 30	§13.3 p. 439
Power series	Lecture 31	§14.2 p. 484
Taylor series	Lecture 31	§14.4 p. 495

Skills checklist. Be able to do each of the following.

1. Use L'Hospital's rule to evaluate certain indeterminate forms.
2. Decide whether an improper integral is convergent or divergent.
3. Evaluate a convergent improper integral.
4. Decide whether an increasing sequence, resp. decreasing sequence, converges or diverges.
5. Evaluate a convergent geometric series.
6. Find the Taylor series expansion of a differentiable function near a point.