

MATH 31B REVIEW SHEET

FINAL EXAM

Make sure to check CCLE for additional materials. Any handouts Prof. Aschenbrenner has given and any practice exercises will also be fair game for the exam. Combine this review sheet with the review sheets for Midterms 1 & 2 because that material will be on the final as well.

All page numbers etc. are from Rogawski.

11.4: HW: 3, 6, 10, 20, 22, 26, 28

Important examples: 1, 2, 3, 4, 5

Know: definition of absolute convergence (p. 575)

absolute convergence implies convergence (p. 575)

definition of conditional convergence (p. 576)

Leibniz Test for Alternating Series (p. 576)

Alternating series error is less than first neglected term in absolute value (p. 578)

11.5: HW: 10, 16, 22, 24, 36, 42, 52, 56

Important examples: 1, 2, 3, 4, 5

Know: Ratio Test (p. 581)

Root Test (p. 583)

11.6: HW: 2, 4, 5, 6, 8, 10, 14, 28, 32, 38, 51

Important examples: 2, 3, 5, 6

Know: definition of power series (p. 585)

definition of radius of convergence (p. 586)

power series can be differentiated and integrated term-by-term (p. 590)

11.7: HW: 2, 6, 8, 14, 32, 34, 68

Important examples: 1, 2, 3, 5, 6, 7, 8, 10

Know: definition of Taylor series expansion (p. 598)

definition of Maclaurin series (p. 598)

Taylor series for a function converges when all derivatives are bounded (p. 599)

series expansion for $\sin(x)$ (p. 599)

series expansion for $\cos(x)$ (p. 600)

Maclaurin series for e^x (p. 600)

Maclaurin series expansion of $\ln(1+x)$ (p. 601)

definition of binomial coefficient (p. 602)

binomial series for $(1+x)^a$ (p. 603)