

Math 222 (Steven Sam), Fall 2016
Homework 8, due November 9

Only the starred problems (8 total) need to be submitted for grading.

For 4.9.13, you may use the fact that $e^{-1/x^2} \leq n!x^{2n}$ for all positive integers n .

Chapter 4.9 (pages 91–92) from book: 1, 2, 3, 6, 7, 10, 11*, 13*, 14*, 19, 21, 23*, 25, 27
Chapter 4.11 (pages 93–94) from book: 1*, 2, 3, 4, 6*

(E1)* Find the Taylor series centered at $a = 0$ of $\frac{1}{(1-x)^3}$ by relating it to the second derivative of $\frac{1}{1-x}$.

(E2)* Find the Taylor series centered at $a = 0$ of $f(x) = \int_0^x e^{t^4} dt$.