

MATH 142 – QUIZ #7 INFORMATION

Reminder: You can use a calculator on this test and I will give you the 6 basic power series: $\frac{1}{1-x}$, $\ln(1+x)$, $\arctan(x)$, e^x , $\sin x$ and $\cos x$.

- The quiz covers the material from sections 8.5 - 8.7, 8.9.
- There will be two basic types of questions: construction of power, Taylor or Maclaurin series and determining properties of such a series.
- If you are asked to construct a series, maximum credit (full or full plus extra) will be given for the construction of the general term for the series. If you can't get the general form, the next level of credit will be given if you can get the first 3 non-zero terms of the series. No extra credit will be given for getting more than 3 non-zero terms unless you can get the general form.
- Recall to construct a series we can either manipulate an existing series or use the Taylor or Maclaurin formula.
- The basic properties of a power, Taylor or Maclaurin series that you'll need to know are how to compute the radius of convergence (Ratio Test) and how to estimate the error (remainder, $|R_n(x)|$) when you use a few terms of the series (the Taylor polynomial) instead of the full series.
- To prepare for the test, review the problems we did in class focusing on both how we manipulated existing series to get new series and how we used the Taylor formula. For the manipulated series, look at how the manipulation effects the radius of convergence. For radius of convergence problems, focus on problems in Section 8.5 and for polynomial approximation (using the remainder), focus on problems in Section 8.9.