Calculus Section 9.10 Taylor/Maclaurin Manipulation  
-Use properties of series and power series to transform a series  
-Use properties of series and power series to solve complex problems

Homework: page 673 #’s 27 – 35 odd, 47, 59, 65

We can manipulate Taylor (and Maclaurin) series in order to find other series by using the following techniques:  
1) Substitute into the series 2) Multiply or divide the series by a constant or variable  
3) Add or subtract two series 4) Differentiate or integrate a series

**Examples)**Find the first four non-zero terms of the Maclaurin series f(x) = sinxcosx.

Find a Maclaurin series and the first four Find a Maclaurin series and the first four  
non-zero terms of f(x) = sin2x. non-zero terms of f(x) = e2x.

Find a Maclaurin series and the first four non-zero terms of.

Find the first 6 non-zero terms of the Maclaurin series for f(x) = ex + cosx. Approximate the value of .

Use a 6th degree Maclaurin polynomial to approximate the value of . What is the maximum error of this approximation?