

## Homework 5

➤ **Section 15.4**

Find the Taylor or Maclaurin series of the given function with the given point as center and determine the radius of convergence.

1)  $e^{(-2z)}, 0$

2)  $\frac{1}{1-z^3}, 0$

3)  $e^{(z)}, -2i$

4)  $\cos^2 z, 0$

Find the Maclaurin series by termwise integrating the integrand. (The integrals cannot be evaluated by the usual methods of calculus)

13)  $erf(z) = \frac{2}{\sqrt{\pi}} \int_0^z e^{(-t^2)} dt$