Math 1B Discussion Problems 14 Mar

1. Find the interval of convergence of the following series.

   (a) $\sum_{n=1}^{\infty} \frac{x^n}{2n-1}$

   (b) $\sum_{n=1}^{\infty} n^n(x-3)^n$

2. Find a power series representation for the following functions and determine the radius of convergence.

   (a) $\frac{x}{1+x^2}$

   (b) $\ln(1+x^2)$

   (c) $\frac{1+x}{(1-x)^2}$