Math 133, Quiz #9

1. Find the interval of convergence and the convergence radius of the following power series:

   (a)

   $$\sum_{n=0}^{\infty} x^n \text{ (3 points)}$$

   (b)

   $$\sum_{n=1}^{\infty} \frac{(4x-5)^{2n+1}}{n^{3/2}} \text{ (4 points)}$$

2. Find the Mac Laurin series of the function $f(x) = \ln(1+x^2)$. (Hint: Use geometric series)**(3 points)**.