

1. [5pts] Find the sum of the series  $\sum_{n=0}^{\infty} \frac{(-1)^n \pi^{2n+1}}{3^{2n+1} (2n+1)!}$

2. [5pts] Find the first 4 nonzero terms in the Mclaurin series of the function  $f(x) = \frac{1+x}{16+x^2}$