1. Determine if the following series are convergent or divergent



1. Find the values of x for which



and tell if the series converges or diverges when given the series



1. Find power series for the following functions



1. Write down the first 4 Taylor polynomials around zero and plot f(x) a long with its approximation

$$f\left(x\right)=e^{2x+1}$$

1. Use the integral test to determine if the series converges or diverges

$\sum\_{k=1}^{\infty }\frac{1}{2k}-\frac{1}{2k+1}$

1. Use the comparison test test to determine if the series converges or diverges

 $\sum\_{k=1}^{\infty }\frac{1}{2k^{4}+8}$

1. EVALUATE THE INTEGRALS. **USE TRIG SUBSTITUTION AND SHOW WORK**

