

Quiz 4

1. Find the Maclaurin series expansion, that is the Taylor series expansion at $x = 0$ of (7 pts.)

$$f(x) = 6xe^{3x^2}.$$

2. Find the Taylor series expansion at $x = 1$ of $\sin(\pi x)$. (7 pts.)

3. Find the interval and radius of convergence for the power series (6 pts.)

$$\sum_{n=0}^{\infty} \frac{3^{n+1}x^n}{2^n}.$$