

**Math 112**  
**Quiz 9**  
**Wednesday, April 30, 2008**

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1. Find the Maclaurin series for  $f(x) = e^{5x}$ .

2. Find the Maclaurin series for  $f(x) = \frac{\sin x}{x}$ .

3. Find the Maclaurin series for  $f(x) = x^2 e^{-x}$ .

4. Find the sum of the series  $\sum_{n=0}^{\infty} \frac{(-1)^n \pi^{2n}}{6^{2n} (2n)!}$ .