

MATH 112-04 QUIZ 8
No books or notebooks are allowed

SURNAME / NAME:

ID:

Date: April 25, 2005

Problem 1. Write the Maclaurin series for

$$\sin x =$$

$$\sin(5x) =$$

$$\cos x =$$

$$\cos(x^3) =$$

$$e^x =$$

$$e^{x/4} =$$

Problem 2. (a) Find the radius of convergence of the power series $\sum_{n=1}^{\infty} \frac{n^2 x^n}{n!}$ and write down the interval of convergence for this series.

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