NAME:
Show ALL your work CAREFULLY.

(a) Use the Ratio Test to determine whether the following infinite series converges or diverges.

\[
\sum_{m=1}^{\infty} \frac{m!}{(2m)!}
\]

(b) Use the Ratio Test and the Alternating Series Test to determine whether the following alternating series converges absolutely or conditionally, or diverges. If it converges, find upper and lower bounds for its limit.

\[
\sum_{n=0}^{\infty} \frac{(-1)^n n^3}{2^n}
\]

Date: November 28, 2005.