Calculus II. Quiz 7. Name _____ Time_____
Show all work for full or partial credit. Put a box around your final answer in each part.

1. For each series, what does the ratio test tell us? [converge absolutely, diverge, or inconclusive]. Show your work by finding the limit.

(a) $\displaystyle\sum_{n=1}^{\infty} \frac{(-2)^n}{(n+2)!}$

(b) $\displaystyle\sum_{n=1}^{\infty} \frac{2^{(n^2)}}{n!}$

2. For each series, what does the root test tell us? [converge absolutely, diverge, or inconclusive]. Show your work by finding the limit.

(a) $\displaystyle\sum_{n=1}^{\infty} \left(\frac{5n^2+3n}{-n^2 e^2}\right)^n$

(b) $\displaystyle\sum_{n=1}^{\infty} \frac{(-1)^n}{n^2}$