Calculus II. Quiz 6b. 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 p-series test tell us? [not applicable, converge, diverge, or inconclusive] Show your work.

   a) $\sum_{n=1}^{\infty} \frac{7^n}{(\sqrt{2})^n}$

   b) $\sum_{n=1}^{\infty} \frac{55}{n^{(0.27)}}$

   c) $\sum_{n=1}^{\infty} \left(\frac{1}{n}\right)^{1.3}$

2. For each series, what does the comparison test tell us? [not applicable, converge, or diverge] Show your work.

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

   b) $\sum_{n=1}^{\infty} \frac{7^n}{3+8^n}$ Compare to $\left(\frac{7}{8}\right)^n$

3. For each series, what does the limit comparison test tell us? [not applicable, converge, or diverge] Show your work.

   a) $\sum_{n=1}^{\infty} \frac{n+3}{(n+1)^2}$

   b) $\sum_{n=1}^{\infty} \frac{3^n}{7^n-n}$