Calculus II - Monday, August 25, 2014 - Mr. Clontz - Quiz 02
Fill in the circle for the correct answer for each of the following problems.

Name: _____ 9am / 10am

1. (10 points) Determine whether or not the series $\sum_{i=1}^{\infty} a_i$ converges or diverges, given its n^{th} partial sum $s_n = a_1 + a_2 + \cdots + a_n = \dfrac{n+3n^3}{n^3+4}$. If it converges, what is its value?
   - ◯ The series converges to 1.
   - ◯ The series converges to 3.
   - ◯ The series converges to $\frac{1}{4}$.
   - ◯ The series diverges.
   - ◯ None of the above.

2. (10 points) Determine whether or not the series $\displaystyle\sum_{n=1}^{\infty} \frac{3^n}{2^{2n}}$ converges or diverges. If it converges, what is its value?
   - ◯ The series converges to $\frac{3}{2}$.
   - ◯ The series converges to 3.
   - ◯ The series converges to $\frac{3}{4}$.
   - ◯ The series diverges.
   - ◯ None of the above.

3. (5 points) Determine whether or not the series $\displaystyle\sum_{n=1}^{\infty} \frac{1}{n^{1/3}}$ converges or diverges.
   - ◯ The series converges.
   - ◯ The series diverges.