Quiz 4A, Calculus 2
Dr. Graham-Squire, Spring 2013

Name: _____

1. (2 points) Does the sequence $\left\{ \dfrac{\sin n}{n^{1/2}} \right\}$ converge or diverge? Justify your reasoning.

2. (2 points) Does the series converge or diverge? State what convergence or divergence test you use, and show your work. If the series converges, find the sum.

$$\sum_{n=1}^{\infty} n^{-1/4}$$

3. (2 points) Does the series converge or diverge? State what convergence or divergence test you use, and show your work.

$$\sum_{n=1}^{\infty} \frac{4n}{(2n^2+1)^3}$$

4. (2 points) Does the series converge or diverge? State what convergence or divergence test you use, and show your work. If the series converges, find the sum.

$$\sum_{n=1}^{\infty} \frac{5^n}{4^{2n}}$$

5. (2 points) Does the series converge or diverge? State what convergence or divergence test you use, and show your work.

$$\sum_{n=1}^{\infty} \left(1 - \frac{3}{n}\right)$$