MATH 222-004

Name:

For full credit please explain all of your answers. No calculators are allowed.

Problem 1. Determine whether the following series converges or diverges:

$$\sum_{n=1}^{\infty} \frac{3+2^{-n}}{\sqrt{n}}$$

If you use a convergence test clearly state which one you use and show all work.

Problem 2. Determine whether the following series converges or diverges:

$$\sum_{k=1}^{\infty} \frac{5^k}{3^k + 4^k}$$

If you use a convergence test clearly state which one you use and show all work.