# Problem Set
# Sections 11.4

## The Comparison Tests

## Problem 1

Use the comparison test to determine whether the series is convergent or divergent $\sum_{n=2}^{\infty} \frac{1}{\sqrt{n} - 1}$

## Problem 2

Determine whether the series is convergent or divergent $\sum_{n=1}^{\infty} \frac{7^n}{6^n - 1}$

## Problem 3

Determine whether the series is convergent or divergent $\sum_{n=1}^{\infty} \frac{\sqrt[3]{n}}{\sqrt{n^3+4n+3}}$

## Problem 4

Determine whether the series is convergent or divergent $\sum_{n=2}^{\infty} \frac{1}{n\sqrt{n^2 - 1}}$

## Problem 5

Determine whether the series is convergent or divergent $\sum_{n=1}^{\infty} \frac{n!}{n^n}$

## Problem 6

Determine whether the series is convergent or divergent $\sum_{n=1}^{\infty} \sin^2\left(\frac{1}{n}\right)$