

Name: *Sawtius*

Section: 7 8

Determine the convergence of the following series; you may use techniques of geometric series, telescoping series, p -series, divergence test, and integral test.

1.
$$\sum_{n=1}^{\infty} \frac{1}{\sqrt[5]{n}}$$

p-series $p = 1/5 \leq 1$

series diverges

2.
$$\sum_{n=3}^{\infty} \left(1 - \frac{7}{n}\right)^n$$
 Divergence test

$$\left(1 - \frac{7}{n}\right)^n \rightarrow e^{-7} \neq 0$$

series diverges