

HOMEWORK FOR SECTION 8.4

DETERMINE WHETHER THE SERIES CONVERGES OR DIVERGES.

1) $\sum_{n=1}^{\infty} \frac{3^n}{n^3}$

2) $\sum_{n=0}^{\infty} \frac{10^n}{n!}$

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

4) $\sum_{n=1}^{\infty} \frac{1}{\sqrt[4]{n}}$

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

6) $\sum_{n=1}^{\infty} \frac{10^n}{(n+1) 4^{2n+1}}$

7) $\sum_{n=1}^{\infty} \frac{5^{n-1}}{(n+1)^2 4^{n+2}}$

8) $\sum_{n=2}^{\infty} \frac{1}{n \cdot \ln n}$

PAGE 446 # 36, 37

39 a) b)

c) $\sum_{n=1}^{\infty} \frac{3^{n-1}}{\sqrt{n}}$

d)

ANSWERS

1) DIVERGES

2) CONVERGES

3) DIVERGES

4) DIVERGES

5) CONVERGES

6) CONVERGES

7) CONVERGES

8) DIVERGES

36 DIVERGES

37 DIVERGES

39 a) AND d)