Math 208

Worksheet: 11.3 through 11.7
Series Convergence Tests

Dr. O.

Use the integral test to determine whether the series converges.

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

A) diverges B) converges

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

A) diverges B) converges

Use the direct comparison test to determine if the series converges or diverges.

3) $\sum_{n=1}^{\infty} \frac{\sin n \cos n}{10^n}$ 3) _____

A) Diverges B) Converges

Use the limit comparison test to determine if the series converges or diverges.

4) $\sum_{n=1}^{\infty} \frac{5}{4n - 3 \ln n - 7}$ 4) _____

A) Diverges B) Converges

5) $\sum_{n=1}^{\infty} \frac{(\ln n)^2}{\sqrt{n}(8n + 9\sqrt{n})}$ 5) _____

A) Converges B) Diverges

Use the ratio test to determine if the series converges or diverges.

6) $\sum_{n=1}^{\infty} \frac{8^n}{n!}$ 6) _____

A) Converges B) Diverges

Answers: 1) B 2) A 3) B 4) A 6) A