

# Worksheet 11

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1. How many terms of the series  $\sum_{n=2}^{\infty} \frac{1}{n(\ln n)^2}$  would you need to add to find its sum to within 0.01?

Determine whether the series converges or diverges.

2.  $\sum_{n=1}^{\infty} \frac{(-1)^n}{\sqrt[3]{n}}$ .

3.  $\sum_{n=1}^{\infty} (-1)^n \frac{n}{\sqrt{n^2 + 4}}$ .

4.  $\sum_{n=1}^{\infty} (-1)^n \cos\left(\frac{\pi}{n}\right)$ .