Problems - 9.1 continued

(5) Show whether the following series converges or diverges.

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

(9) Show whether the following series converges or diverges.

$$\sum_{n=1}^{\infty} \frac{n}{e^n}$$

(13) For what values of p does the series

$$\sum_{n=1}^{\infty} \frac{\ln n}{n^p}$$

converge? Justify your answer.