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1. Use either the *Comparison Test* or *Limit Comparison Test* to determine whether the series converges or diverges, and *justify your answer*.

$$\sum_{n=100}^{\infty} \frac{n}{n^3 - 2}$$

2. Use the *Ratio Test* to determine if the series converges or diverges, and *justify your answer*.

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