Q1. Find the interval and radius of convergence for $\displaystyle\sum_{n=1}^{\infty} \frac{(-1)^n n!}{(2n-1)!} x^n$.

Q2. Find the sum of $\displaystyle\sum_{n=1}^{\infty} \frac{(-1)^n}{2^n n}$.

Q1. Find the interval and radius of convergence for $\displaystyle\sum_{n=0}^{\infty}\frac{(x+1)^n}{3^n(n+1)}$.

Q2. Find the sum of $\displaystyle\sum_{n=1}^{\infty}\frac{n}{2^{n-1}}$.

Q1. Find the interval and radius of convergence for $\displaystyle\sum_{n=1}^{\infty}\frac{(-1)^{n}(x-2)^{n}}{n}$.

Q2. Find the sum of $\displaystyle\sum_{n=0}^{\infty}\frac{(-1)^{n}}{2n+1}$.