A. Use the Ratio Test to determine the values of $x$ for which this power series converges, and give the radius of convergence:

$$
\sum_{n=1}^{\infty} (3x)^n
$$

B. Use the Ratio Test to determine the values of $x$ for which this power series converges, and give the radius of convergence:

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