Haciendo q tender a infinito

$$\sum_{n=0}^{\infty} (-1)^n z^{3n} = (1-z^3)\sum_{n=0}^{\infty} z^{6n} + \lim_{n\to\infty} \varepsilon_n z^{3n} = \frac{1-z^3}{1-z^6}$$

$$\uparrow$$

$$|z|<1$$