

**Esercizio 1.** Calcolare massimo e minimo limite delle seguenti successioni:

$$(A) \left(1 + \frac{(-1)^n}{n}\right)^n$$

$$(B) \frac{3^{(-1)^n} + 5 \cos\left(\frac{n\pi}{2}\right)}{(-1)^{3n} + 5 \cos\left(\frac{2\pi}{n}\right)}$$

$$(C) \sqrt{n} - \lfloor \sqrt{n} \rfloor$$

$$(D) (-1)^n \arctan(n)$$

$$(E) \frac{(-1)^n n + \sqrt{n} + 3}{2n + (-1)^n \sqrt{n}}$$