

C. Usando la def.^{ne} di limite, verificare i seguenti limiti:

$$1. \lim_{n \rightarrow +\infty} \frac{3n}{n+2} = 3$$

$$2. \lim_{n \rightarrow +\infty} \frac{1}{2^n + 1} = 0$$

$$3. \lim_{n \rightarrow +\infty} (n^2 - 6) = +\infty$$

$$4. \lim_{n \rightarrow +\infty} \frac{n^3}{n+5} = +\infty$$

$$5. \lim_{n \rightarrow +\infty} (5 - \log_2 n) = -\infty$$

$$6. \lim_{n \rightarrow +\infty} \sqrt{\frac{9n}{n+2}} = 3$$

$$7. \lim_{n \rightarrow +\infty} (n^3 - 5n) = +\infty$$

$$8. \lim_{n \rightarrow +\infty} (\sqrt{n^2 + 2} - n) = 0$$