

UNIVERSITÀ DEGLI STUDI ROMA TRE - MATEMATICA
ESERCIZI DI AM120

A.A. 2024/2025 - ESERCITAZIONE I

Esercizio 1.

$$(1) \sum_{n=1}^{+\infty} \frac{\sqrt[3]{n}}{(n+1)\sqrt{n}};$$

$$(2) \sum_{n=1}^{+\infty} \frac{1}{\sqrt{n(n+1)}};$$

$$(3) \sum_{n=1}^{+\infty} \left(\frac{n+1}{2n-1} \right)^n;$$

$$(4) \sum_{n=1}^{+\infty} \left(\frac{n}{3n-1} \right)^n;$$

$$(5) \sum_{n=1}^{+\infty} \left(\frac{3n}{3n+1} \right)^n;$$

$$(6) \sum_{n=1}^{+\infty} \frac{2n-1}{(\sqrt{2})^n};$$

$$(7) \sum_{n=1}^{+\infty} \frac{2^{n-1}}{n^n};$$

$$(8) \sum_{n=1}^{+\infty} \frac{2^n}{n!};$$

$$(9) \sum_{n=1}^{+\infty} \frac{n^n}{(2n)!};$$

$$(10) \sum_{n=1}^{+\infty} \arcsin \frac{1}{\sqrt{n}};$$

$$(11) \sum_{n=1}^{+\infty} \left(\frac{\pi}{2} - \arctan n \right);$$