

FUNZIONI

5 mar '21

FUNZIONI LOGARITMICHE

ex $y = n^2 (1 - \ln n)$

...

Loggimpere

FUNZIONI GONIOMETRICHE

ex $y = \frac{2 \sin n - 1}{\cos^2 n - 1}$

$[0; 2\pi]$

CE $n \neq k\pi$

$n \in (0; \pi) \cup (\pi; 2\pi)$

limiti

$$\lim_{n \rightarrow 0^+} f(n) = \lim_{n \rightarrow 0^+} \frac{2 \sin n - 1}{-\sin^2 n} = \frac{-1}{0^-} = +\infty$$

$$\lim_{n \rightarrow \pi} f(n) = \lim_{n \rightarrow \pi} \frac{2 \sin n - 1}{-\sin^2 n} = \frac{-1}{0^-} = +\infty$$

$$\lim_{n \rightarrow 2\pi^-} f(n) = +\infty$$

zeri e segno ... aggiungere

Fare derivate

FUNZIONI INVERSE DELLE GONOMETRICHE

ex $y = \arcsin \frac{1-n}{n+2}$

CE è più comodo farlo
graficamente

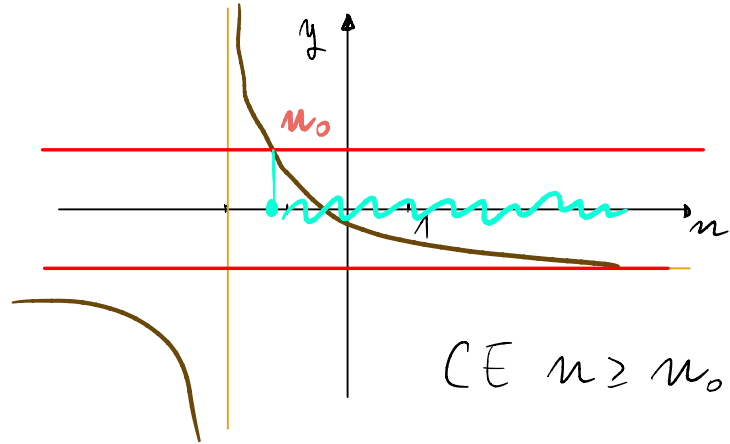
$$y = \frac{1-n}{n+2}$$

intersecato con

$$y = \pm 1$$

$$n_0 = -\frac{1}{2}$$

$$\Rightarrow n \in \left[-\frac{1}{2}; +\infty\right) \Rightarrow A\left(-\frac{1}{2}; \frac{\pi}{2}\right)$$



zeri

$$\arcsin \frac{1-n}{n+2} = 0 \quad \leadsto \quad n = 1$$

$B(1; 0)$

$$y = \arcsin \frac{1}{2} \quad \leadsto \quad n = \frac{\pi}{6} \quad (\text{l'arcseno ha codominio limitato})$$

$C(0; \frac{\pi}{6})$

limiti

$$\lim_{n \rightarrow +\infty} f(n) = -\frac{\pi}{2} \quad \text{A.O. dx: } y = -\frac{\pi}{2}$$

$$y' \quad y' = \frac{1}{\sqrt{1 - \left(\frac{1-n}{n+2}\right)^2}} \cdot D\left(\frac{1-n}{n+2}\right) \quad \dots \quad \text{no } \underline{\text{max o min}}$$

ex

$$y = \arctan n + n$$