MdC on line 8/1/2016 (2)

Cognome e Nome _____ Matr. _____

1) $\lim_{n\to+\infty} \binom{2n+1}{2n-1} \operatorname{sen} \frac{1}{3n^2+1} =$ { discutere al variare di α

2) $\lim_{n\to+\infty} \dfrac{e^{\frac{n}{n^3+1}} - 1}{\log\left(\frac{n^2+1}{n^3+n+1}\right)}$

3) $\lim_{n\to+\infty} \left[n \cdot \left(\sqrt[3]{\frac{2n+1}{3n+1} - \frac{2}{3}} - \sqrt[2]{\frac{n}{n+1} - 1} \right) \right]$

4) $\sum \left(\frac{1}{n^2-16} - \frac{1}{n^2+16} \right)$

5) $\sum \dfrac{\left((n+1)!\right)^2}{(n+2)^3 \left(2(n+1)\right)!}$

6) $\sum_{2}^{+\infty} \left(\frac{e}{\pi}\right)^n$ converge! dire perché e calcolarne la somma