BY GIMUSI 03/12/15

lim [radice di n]! / n^2 ln(n)
n-> inf

$$\lim_{n \to \infty} \frac{\lfloor \sqrt{n} \rfloor !}{n^2 \log n} = +\infty$$

$$n! \geq (n-5)^5 \leadsto \lfloor \sqrt{n} \rfloor ! \geq (\lfloor \sqrt{n} \rfloor - 5)^5 \geq (\sqrt{n} - 6)^5$$

$$\frac{\lfloor \sqrt{n} \rfloor !}{n^2 \log n} \geq \frac{(\sqrt{n} - 6)^5}{n^2 \log n} \sim \frac{\sqrt{n}}{\log n} \to +\infty$$

lim [radice di (n^(2) + 1)] - n
n->inf

$$\lim_{n \to +\infty} \lfloor \sqrt{n^2+1} \rfloor - n = 0$$

$$n < \sqrt{n^2+1} < n+1 \qquad n^2 < (\sqrt{n^2+1})^2 < (n+1)^2$$

$$\lfloor \sqrt{n^2+1} \rfloor = \lfloor n \rfloor = n$$

$$\lfloor \sqrt{n^2+1} \rfloor - n = 0$$