$$\frac{p(n)}{q(n)}$$

Konv/Lim

$$\overline{\underline{\lim}}_{\infty} \frac{(-1)^n n^2 + \lceil n-2 \rceil^2}{2n^2-17}: \quad (-1)^n \frac{-n^2+2n+2}{3n^2-n+1}: \quad \frac{(n+1)^3}{1-2n^3}: \quad (-1)^n \frac{n^2+3}{n^3+2}: \quad \frac{2n^2+3n}{4-n^2}: \quad \frac{(n+1)^2-n^2}{n+1}$$

$$\sqrt{n+1}-\sqrt{n} = \frac{n+1-n}{\sqrt{n+1}+\sqrt{n}} = \frac{1}{\sqrt{n+1}+\sqrt{n}} \rightsquigarrow 0$$

$$\begin{cases} a_{n+} - a_n \leqslant M \\ a_n \rightsquigarrow \infty \end{cases} \qquad \sqrt{a_{n+}} - \sqrt{a_n} = \frac{a_{n+} - a_n}{\sqrt{a_{n+}} + \sqrt{a_n}} = \frac{M}{\sqrt{a_{n+}} + \sqrt{a_n}} \rightsquigarrow 0$$

$\frac{1+(-1)^n}{n}$: $1+\frac{(-1)^n}{n}$: $(-1)^n + \frac{1}{n}$: $(-1)^n \left(1+\frac{1}{n}\right)$: erste 10 Glieder/bes/finde mon TF/Lim/konv?

$$\begin{cases} \frac{n+1}{n-1} & n \text{ even} \\ \frac{1-n}{1+n} & n \text{ odd} \end{cases}$$