Vyjasnění

$$\frac{|u_{k+1}|}{|u_k|^p} = \frac{|u_{k-1}|^3 |u_{k-2}|}{|u_{k-1}|^{2p} |u_{k-2}|^p}, \quad p \in [1, \infty)$$

$$\limsup_{k\to\infty} \frac{|u_{k-1}|^3 |u_{k-2}|}{|u_{k-1}|^{2p} |u_{k-2}|^p} = \limsup_{k\to\infty} |u_{k-1}|^{3-2p} |u_{k-2}|^{1-p}$$

$3 - 2p > 0$, $3 > 2p$, $p < \frac{3}{2}$ $\Rightarrow$ $|u_{k-1}|^{3-2p} \to 0$, $|u_{k-2}|^{1-p} \to \infty$

$3 - 2p < 0$, $p > \frac{3}{2}$ $\Rightarrow$ $|u_{k-1}|^{3-2p} \to \infty$, $|u_{k-2}|^{1-p} \to \infty$

$3 = 2p$ $\Rightarrow$ $|u_{k-1}|^0 |u_{k-2}|^{-\frac{1}{2}} \to 1 \cdot \infty$

($|u_{k-1}| \to 1$, $|u_{k-2}| \to \infty$)

$\Rightarrow Q_Q\{u_k\} \leq \frac{3}{2}$

(ostatní vlastnosti Q řádu)