Vztahy mezi R-faktorem a Q faktorem

Z věty na str. (4c) plyne:

$$Q_R(u_k) \geq \tau,$$

kde τ je kořen rovnice $t^2 - t - 1 = 0$, $\tau = \frac{1+\sqrt{5}}{2}$.

(B) Pro k - liché

$$u_{k+1} = u_k u_{k-1} = (u_{k-1})^3 u_{k-2}$$
$$u_k = (u_{k-1})^2 u_{k-2}$$

Pak

$$\frac{|u_{k+1}|}{|u_k|^{3/2}} = \frac{|u_{k-1}|^3 |u_{k-2}|}{|u_{k-1}|^3 |u_{k-2}|^{3/2}} = \frac{1}{|u_{k-2}|^{1/2}} \to \infty$$

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

Poznámka $Q_R\{u_k\} = \frac{1+\sqrt{5}}{2} \approx 1{,}618 > 1{,}5 \geq Q_Q\{u_k\}$