1024-13-55   **Paul-Jean Cahen*** (`paul-jean@numericable.fr`), Department of Mathematics UNC Charlotte, 376 Fretwell Bldg, 9201 University City Blvd, Charlotte, NC 28223-0001. *Maximal length of Newton orderings and Shinzel sequences in quadratic fields.* Preliminary report.

A Shinzel sequence in a domain D is a sequence $\{u_n\}$ such that, for each ideal I with norm $N(I) = |D/I|$, the first N elements of the sequence represent all residue classes modulo I. A Newton ordering is such that the polynomials $f_n = \prod_{k=0}^{n-1} \frac{X-u_k}{u_n-u_k}$ form a basis of the ring of integer-valued polynomials $\mathrm{Int}(D)$. Both notions are closely related. However, examples are given of domains endowed of an infinite sequence of one type and not of the other. It is shown there are no infinite Shinzel sequences in quadratic number fields. Restricting to finite sequences, the maximal length of both type of sequences is determined. (Received December 15, 2006)

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