## On linear recurrence with variable coefficients

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**Abstract** - In this paper we study the linear recurrence with variable positive coefficients. It contains general conditions such that the recurrence is bounded, convergence to 0, convergence to a strictly positive limit and divergence to  $\infty$ . Also it contains some examples and applications together with necessary and sufficient conditions for convergence when the first coefficient is greater than 1.

**Key words and phrases :** linear recurrence, homogeneous linear recurrence **Mathematics Subject Classification** (2000) : 40A05