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**Title:** Semiperiodic vectors and the context-freeness of  $Q_n = Q \cap (ab^*)^n$

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It is conjectured in DÖMÖSI *et al.* LNCS 710, pp. 194–203, that if  $Q$  denotes the set of all primitive words over a given alphabet  $X$  containing the letters  $a$  and  $b$ , then the languages  $Q_n = Q \cap (ab^*)^n$  are context-free for all positive numbers  $n$ . In this paper we classify the elements of  $Q_n$ , in order to get a new method for constructing elements of  $Q_n$ .

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