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Opérations sur les mots de Christoffel

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ABSTRACT. The slope of a finite sequence of 0 and 1 can be defined as the number of 1 divided by the number of 0 and it is possible to generalize this definition to infinite sequences. Considering the link between Christoffel words (or characteristic sequences) and continued fractions, we study the behaviour of such words when adding their slopes, or multiplying them by a positive integer.

After an outline of the different notions around Christoffel words, the sum and product are introduced as algorithms permitting to understand the mechanism of these operations as well as possible.

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