

PARIKH q - MATRIX UNDER PROUHET MORPHISM

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Abstract: The Parikh q -matrix is the extension of Parikh matrix that maps words to matrices with polynomial entries. Since Parikh q -matrix mapping is not an injective mapping, we consider Prouhet morphism on words to distinguish q -equivalent binary words by their Parikh q -matrix. We state the formulae to calculate q -counting of scattered subwords of the image of any word under Prouhet morphism. With the aid of Parikh q -matrices, we establish various properties of image of words under this morphism.

Keywords and Phrases: Subwords, Parikh matrix, Parikh q -matrix, Prouhet morphism.

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