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## A NEW APPROACH TO CODING THEORY

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### ABSTRACT

In this paper, we initially investigate  $k$ -Narayana sequence and then define negative indexed  $k$ -Narayana sequence. Moreover we obtain some interesting properties for them. Furthermore, we give a new approach to the coding theory with  $k$ -Narayana sequence. Finally, we illustrate the coding steps with two examples and verify the results via software.

**Keywords**  $k$ -Narayana sequence · Coding · matrix representation

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