

Teaching the Binary System via Beautiful Facts from the Real Life

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Abstract : In recent times the decimal number system to which we are accustomed has received serious competition from the binary number system. In this note, an approach is suggested to teaching and learning the binary number system using examples from the real world. More precisely, we will demonstrate the utility of the binary system in describing the optimal strategy to win the Chinese Nim game, and in telegraphy by decoding the hidden message on Perseverance's Mars parachute written in the language of binary system. Finally, we will answer the question, "why do modern computers prefer the ternary number system instead of the binary system?". All materials are provided in a format that is conducive to classroom presentation and discussion.

Keywords : binary number system, Nim game, telegraphy, computers prefer the ternary system

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