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The Power and the Limits of the Abacus


Abstract. The abacus is a well-known calculating tool with a limited number of placeholders for digits of operands and results. Given a number of rods $n$ of the abacus, a chosen basis of the number system and the first operand $a$, this paper deals with the possible values of the other operand $b$ in the four basic arithmetic operations performed with integers on the abacus.