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**Title:** An upper bound for the number of solutions of ternary purely exponential Diophantine equations II

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Let  $a, b, c$  be fixed pairwise coprime positive integers with  $\min\{a, b, c\} > 1$ . In this paper, by analyzing the gap rule for solutions of the ternary purely exponential Diophantine equation  $a^x + b^y = c^z$ , we prove that if  $\max\{a, b, c\} \geq 10^{62}$ , then the equation has at most two positive integer solutions  $(x, y, z)$ .

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