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For any positive integer k let $\phi(k)$ and $\sigma(k)$ be the Euler function of k and the sum of divisors function of k , respectively. In 1964, Mąkowski and Schinzel conjectured that the inequality

$$\sigma(n) \geq n \setminus 2$$

holds for all positive integers n . To this date, this conjecture is still unsettled. In this talk, we present a method by which we can infer that the lower density ρ of the set of all positive integers n satisfying the above Mąkowski-Schinzel inequality is at least 0.74. We apply our method to also give a partial affirmative answer to a question of Erdős concerning the set of positive integers n for which

$$\phi(n) > \phi(n - \phi(n)).$$

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