## Mathematics > Number Theory

## Product-free sets with high density

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We show that there are sets of integers with asymptotic density arbitrarily close to 1 in which there is no solution to the equation $a b=c$, with $a, b, c$ in the set. We also consider some natural generalizations, as well as a specific numerical example of a product-free set of integers with asymptotic density greater than 1/2.

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