

## Nonexistence of $D(4)$ -quintuples

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We call the set of  $m$  positive distinct integers  $D(n)$ - $m$ -tuple if the product of any of its two elements increased by  $n$  is a perfect square. Recently, a conjecture about nonexistence of  $D(1)$ -quintuples was proven. We will show how we have proven that a  $D(4)$ -quintuple also doesn't exist and present some facts about the conjecture that an extension of a  $D(n)$ -triple to a  $D(n)$ -quadruple is unique, which is still an open problem in both cases  $n = 1$  and  $n = 4$ . This is a joint work with A. Filipin.