

# ***How to solve a diophantine equation***

## Abstract:

We demonstrate for a concrete example how all solutions in integers to an equation of the form  $y^2 = f(x)$  can be found. For this, we use a combination of Baker's method to get an upper bound for the  $x$ -coordinates of potential solutions and the Mordell-Weil sieve to get a lower bound for potential unknown solutions. This is joint work with Yann Bugeaud, Maurice Mignotte, Samir Siksek and Szabolcs Tengely.

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