Problems – 07/31/2025
he solutions to the problems below
will be published on Sundnay 08/03/2025

**MathLovers**

**Problem 1.** Twelve different two-digit numbers are given. Prove that the difference between some two of them is a two-digit number in the form of $aa$

**Problem 2.** Let $n \in \mathbb{Z}_+$. Show that the number $2(n^2 + 1) - n$ is never the square of an integer.

*Good Luck!*

We encourage you to submit your solutions via the website:
`https://mathlovers.eu/submit-solution/`!