



Problems for 10/27/2025
The solutions to the problems below
will be published on Thursday 10/30/2025

 **Problem 1.** A convex quadrilateral $ABCD$ satisfies

$$|AD| + |BC| = |CD|.$$

The bisectors of angles $\sphericalangle BCD$ and $\sphericalangle CDA$ intersect at point S . Prove that $|AS| = |BS|$.

 **Problem 2.** The numbers $1, 2, 3, \dots, 2025$ are written on a board. Each minute, we choose two distinct numbers a and b , erase them, and write the number $a + b - 1$ instead. The process continues until only one number remains on the board. What number will remain at the end?

Good luck!

We encourage you to submit your solutions via
<https://mathlovers.eu/submit-solution/>!