



MathLovers

Problems 11/24/2025

Solutions to the following problems
will be published on Thursday 27/11/2025

Problem 1. Snow White has chocolates weighing 1 g, 2 g, 3 g, ..., 1001 g and many dwarves. Snow White wants to distribute the chocolates to each of them in the following way: the sum of the masses of the chocolates (excluding the heaviest one) that a dwarf has must be equal to the mass of the largest chocolate that he possesses. Determine whether Snow White is able to distribute the chocolates in this way.

Problem 2. Find all pairs of integers x, y satisfying the equation:

$$\frac{y}{2} = \frac{3x - 5}{x - 2}.$$

Good luck!

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