J - Joint Venture

Liesbeth and Jan are building a robot for a course project and have discovered that they need to fit two pieces of Lego into an opening.

The opening is x centimetres wide and the sum of the lengths of the two pieces has to be *precisely* equal to the width of the opening, or else the robot will break during the project demonstration, with catastrophic consequences for the grades of the two students.

Photo by Alan Chia

Luckily, Liesbeth and Jan were able to sneak into the physics laboratory late one night to measure the lengths of their remaining Lego pieces very accurately. Now they just need to select two pieces that will fit the opening perfectly.

Input

For each test case, you get:

- a line containing one positive integer: x, denoting the width of the opening in centimetres, with $1 \leq x \leq 20$.
- a line containing one non-negative integer: n, denoting the remaining number of Lego pieces Liesbeth and Jan have access to, with $0 \leq n \leq 1000000$.
- n lines containing positive integers ℓ, denoting lengths of Lego pieces in nanometres. Liesbeth and Jan have told you that no piece of Lego is longer than 10 centimetres, or 100000000 nanometres.

Output

For each test case, a row containing the word '`danger`' if no two pieces of Lego exist that precisely fit into the opening, or '`yes` ℓ_1 ℓ_2', with $\ell_1 \leq \ell_2$, should two such pieces of lengths ℓ_1 and ℓ_2 exist.

In case multiple solutions exist, a solution maximising the size difference $|\ell_1 - \ell_2|$ must be printed.

Example

input	output
1 4 9999998 1 2 9999999	yes 1 9999999