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## Problem 6: Hogwarts Towers

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### Statement

These are dark days, Voldemort and his evil army took over Hogwarts castle.

In order for our heroes to take their castle back, they have to destroy the 8 towers in which powerful evil creatures took place to defend their wicked reign.

Harry is only man for the job, he rode his injured dragon in a last hope attack to destroy the towers. each time harry shoots one; his wounded dragon loses altitude. The evil guards can't hurt them as long as they are flying higher than the tallest tower of the eight.

Help Harry to find the right order in which he'll destroy the towers.

### Constraints

The number of towers is 8.

$1 \leq \text{Towers height} \leq 8$ .

The dragon initial altitude: 9

### Input

A single line of 8 values denoting the length of each tower.

### Output

The order of towers Harry has to shoot, otherwise "Hogwarts is down" If there is no possible way to win this battle.

## Example

Input	Output
1 2 3 4 5 6 7 8	8 7 6 5 4 3 2 1
5 6 7 8 8 1 3 7	Hogwarts is down