

Lake

Input file: *standard input*
Output file: *standard output*
Time limit: 2 seconds
Memory limit: 512 mebibytes

On a hot summer day, Tatiana and the children set off on foot to the lake. The journey was so exhausting that everyone was delighted when their friend Olga suddenly flew to them in a helicopter after they had finished swimming.

There are two rows of passenger seats available in the helicopter. To reduce the number of flights, Olga allowed an adult to sit with a child on all passenger seats except the center rear seat. And in the center rear row, either one adult or one child can sit.

Below is a diagram indicating where an adult can sit together with a child on the same seat (maximum of 2 passengers per seat), and where only one person, either an adult or a child, can sit. The pilot's seat, occupied by Olga, is also marked.

	O.		max 2
max 2	max 1	max 2	

What is the minimum number of flights should Olga make to bring everyone back home? One-way travel is counted as a separate flight.

Input

The first line contains two integers n and m separated by a space: the number of adults and children who set off to the lake on foot ($1 \leq n, m \leq 10^6$).

Output

Output the minimum number of flights required to return everyone home.

Examples

<i>standard input</i>	<i>standard output</i>
1 1	1
1 4	1
5 5	3