Integer Half-Sum

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

Consider a board with integers written on it. Initially, each integer from ℓ to r, inclusive, is written on the board exactly once. In one step, we can choose two numbers a and b on the board such that their half-sum $\frac{a+b}{2}$ is an **integer**, erase the two chosen numbers and write their half-sum on the board instead.

After zero or more steps, can we obtain a board with a single number on it? If yes, what is the maximum possible number that can be the single number left on the board?

Input

The first line contains two integers ℓ and r: the minimum and maximum numbers that are on the board initially ($1 \le \ell \le r \le 100$).

Output

Print the maximum possible number that can be obtained as a single number on the board. If obtaining a single number on the board is impossible, print -1.

Example

standard input	*standard output*	*explanation*
2 4	3	$\underline{2}, 3, \underline{4} \to \underline{3}, \underline{3} \to 3$