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## Mixing in base 2

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Given a natural number  $x > 0$  with  $n$  bits, we denote with  $x_{n-1} \dots x_0$  its representation in base 2. For example,  $x = 8$  in base 2 is 1000, so  $x_3 = 1$  and  $x_2 = x_1 = x_0 = 0$ .

Write a program to mix the base 2 representations of two given natural numbers  $x$  and  $y$  with the same number of bits  $n$ . That is, print  $x_{n-1}y_{n-1} \dots x_0y_0$ .

### Input

Input consists of several cases, each with two natural numbers with the same number of bits, between 1 and 30.

### Output

For every case, print the mixing of the representations in base 2 of the two numbers.

#### Sample input

```
8 15
1 1
2 3
1000 600
900000 1000000
```

#### Sample output

```
11010101
11
1101
11101011100111000000
1111011110011010100011101001100000000000
```

### Problem information

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