

Cups and Swaps

Input File: cupsandswaps.txt

Have you ever seen the street performance in which a person places a coin under one of several cups, shuffles them, and invites an audience member to guess the location of the coin? Well, given the cup you want to track, you want to determine after a series of shuffles where the coin ends up.

There are c locations for the cups, numbered 1, 2, ..., c .

Input:

Three space separated integers, c , t , and n , the number of locations ($2 < c < 16$), the current location number of the cup to track (t), and the number of cup swaps ($0 < n \leq 50$).

For the next n lines:

Two space separated integers, a and b , specifying the locations of the two cups swapped.

Output:

The location of the tracked coin.

Sample Input:

```
8 1 10
1 2
3 2
3 4
5 4
5 6
7 6
1 2
2 1
8 6
7 8
```

Sample Output:

```
8
```