

Sometimes it's better to use dynamic size arrays. Java's [ArrayList](#) can provide you this feature. Try to solve this problem using ArrayList.

You are given n lines. In each line there are zero or more integers. You need to answer a few queries where you need to tell the number located in y^{th} position of x^{th} line.

Take your input from System.in.

Input Format

The first line has an integer n . In each of the next n lines there will be an integer d denoting number of integers on that line and then there will be d space-separated integers. In the next line there will be an integer q denoting number of queries. Each query will consist of two integers x and y .

Constraints

- $1 \leq n \leq 20000$
- $0 \leq d \leq 50000$
- $1 \leq q \leq 1000$
- $1 \leq x \leq n$

Each number will fit in signed integer.

Total number of integers in n lines will not cross 10^5 .