# Meteorite

Today, the LASER (**L**aboratory for **A**dvanced **S**cientific **E**mission of **R**ays) made a huge announcement - they discovered a new element. They even found out how to synthesize it: At first, you need a meteorite that is rapidly accelerating towards earth. Then you heat it up with a high-powered laser using a special focussing crystal (because lasers are totally awesome). This causes the meteorite to be rapidly condensed into one very small lump of the new element - aptly named "meteoritium".

However that process still leaves a small problem - a super dense lump of meteoritium rapidly falling through the earth's atmosphere. They now issued a safety warning to all people living close to the calculated impact site. To her excitement, Lea is among them.

She is now itching to know if there is a chance that the meteoritium will land on her parents' property (you can think of the property as a simple polygon with no intersecting edges and no holes) so she can be one of the first people on earth to see the new element.

## Input

The first line of the input contains an integer $t$. $t$ test cases follow, each of them separated by a blank line.

Each test case begins with a line consisting of 3 integers $x_{impact}$, $y_{impact}$, the coordinates of the calculated impact site and $n$, the number of sides that her parents' property has. $n$ lines follow, each containing 4 integers $x_1, y_1, x_2, y_2$, describing a side of the polygon connecting the points $(x_1, y_1)$ and $(x_2, y_2)$.

## Output

For each test case, output one line containing "Case #$i$: $x$" where $i$ is its number, starting at 1, and $x$ is "jackpot" if the impact site is contained in the given polygon and "too bad" otherwise. Each line of the output should end with a line break.

## Constraints

- $1 \leq t \leq 20$
- $3 \leq n \leq 1000$
- $-1000 \leq x_i, y_i \leq 1000$
- Every coordinate of the polygon will have exactly 2 incident sides.
- The given polygon will always be a single, connected shape.
- $(x_{impact}, y_{impact})$ will never lie on a side or corner of the polygon.

### Sample Input 1

```
2
1 1 3
1 0 2 2
2 2 0 1
0 1 1 0

0 1 5
-1 -1 -1 2
1 1 1 0
1 0 -1 -1
0 0 1 1
-1 2 0 0
```

### Sample Output 1

```
Case #1: jackpot
Case #2: too bad
```

**Sample Input 2**

```
3
-3 4 10
5 0 2 -2
1 -2 0 -5
2 -2 1 -2
-2 -1 -5 -1
0 -5 -1 -1
-5 -1 -5 0
-2 3 5 0
-5 0 -2 4
-2 4 -2 3
-1 -1 -2 -1

-2 0 10
-4 -1 -5 0
-1 1 0 4
-5 0 -5 1
-5 1 -1 1
5 0 3 -4
3 -4 2 -5
0 4 4 4
-2 -1 -4 -1
4 4 5 0
2 -5 -2 -1

3 -3 9
1 3 5 0
-5 0 -5 3
5 0 1 -4
-5 3 -3 3
0 3 1 3
-3 3 0 3
-3 -2 -5 -3
-5 -3 -5 0
1 -4 -3 -2
```

**Sample Output 2**

```
Case #1: too bad
Case #2: jackpot
Case #3: too bad
```