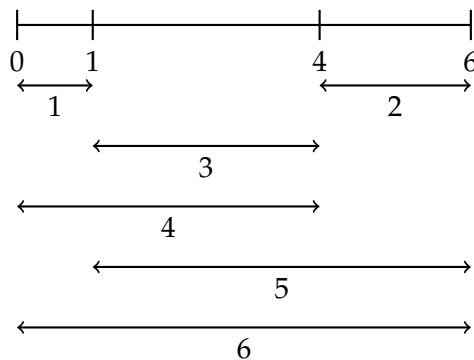


Gerard the handyman

P41570_en

Gerard the handyman is a resourceful fellow. He loves to tinker with and repair his bike. Unfortunately, he has lost one of his precious tools: his ruler.

To compensate, he takes a bar of length 6 cm and marks two points on it, at 1 cm and 4 cm. With these marks, he can now measure any integer length from 1 to 6. Moreover, each measurement can be made in exactly one way:



Given a bar of length n and k marked points given in increasing order, please determine whether it is possible to measure all lengths from 1 to n . Additionally, determine whether each measurable length can be obtained in a unique way or in multiple ways.

Input

Input consists of several cases, each one with n and k , followed by the positions p_i of the points. Assume $2 \leq n \leq 1000$, $1 \leq k < n$, and $1 \leq p_1 < p_2 < \dots < p_k < n$.

Output

For every case, print “YES” or “NO” followed by “unique” or “multiple”, depending on the answer.

Sample input 1

```
6 2 1 4
72 9 1 4 13 28 33 47 54 64 70
72 10 1 4 9 19 24 31 52 56 58 69
10 4 1 2 3 6
```

Sample output 1

```
YES unique
NO unique
NO multiple
YES multiple
```

Problem information

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