

# Olympic Tin Học Sinh Viên [OLP] & ICPC

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## Tóm tắt nội dung

This text is a part of the series *Some Topics in Advanced STEM & Beyond*:

URL: [https://nqbh.github.io/advanced\\_STEM/](https://nqbh.github.io/advanced_STEM/).

Latest version:

- *Olympic Tin Học Sinh Viên [OLP] & ICPC*.

PDF: URL: [.pdf](#).

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## 1 CSES Problem Set

Link: <https://cses.fi/problemset/>.

**Problem 1 (CSES/Josephus Queries).** Consider a game where there are  $n \in \mathbb{N}^*$  children, numbered  $1, 2, \dots, n$ , in a circle. During the game, every 2nd child is removed from circle, until there are no children left. Task: process  $q$  queries of the form: “when there are  $n$  children, who is the  $k$ th child that will be removed?”

- Input. The 1st input line has an integer  $q$ : the number of queries. After this, there are  $q$  lines that describe the queries. Each line has 2 integers  $n, k$ : the number of children & the position of the child.
- Output. Print  $q$  integers: the answer for each query.

It seems to me that Jack97 proposed this problem.

## 2 OLP

## 3 ICPC

## 4 Miscellaneous

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