23/05/2019 K - Stones

K - Stones

Time Limit: 2 sec / Memory Limit: 1024 MB

Score: 100 points

Problem Statement

There is a set $A = \{a_1, a_2, \dots, a_N\}$ consisting of N positive integers. Taro and Jiro will play the following game against each other.

Initially, we have a pile consisting of K stones. The two players perform the following operation alternately, starting from Taro:

• Choose an element x in A, and remove exactly x stones from the pile.

A player loses when he becomes unable to play. Assuming that both players play optimally, determine the winner.

Constraints

- · All values in input are integers.
- $1 \le N \le 100$
- $1 \le K \le 10^5$
- $1 \le a_1 < a_2 < \dots < a_N \le K$

Input

Input is given from Standard Input in the following format:

Output

If Taro will win, print First; if Jiro will win, print Second.

Sample Input 1 Copy

2 4

2 3

Сору

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Sample Output 1 | 0



If Taro removes three stones, Jiro cannot make a move. Thus, Taro wins.

Sample Input 2 Copy 2 5 2 3

Sample Output 2 Copy



Whatever Taro does in his operation, Jiro wins, as follows:

- If Taro removes two stones, Jiro can remove three stones to make Taro unable to make a move.
- If Taro removes three stones, Jiro can remove two stones to make Taro unable to make a move.

Sample Input 3 Copy

2 7 2 3

Sample Output 3 Copy

First Copy

Taro should remove two stones. Then, whatever Jiro does in his operation, Taro wins, as follows:

- If Jiro removes two stones, Taro can remove three stones to make Jiro unable to make a move.
- If Jiro removes three stones, Taro can remove two stones to make Jiro unable to make a move.

Sample Input 4 Copy

Copy

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3 20 1 2 3 Sample Output 4 Copy Сору Second Sample Input 5 Сору 3 21 1 2 3 **Sample Output 5** Сору First Sample Input 6 Copy Сору 1 100000 Sample Output 6 Copy

Second

Сору