

Problem B

Bee House Perimeter


Problem ID: beehouseperim

CPU Time limit: 1 second

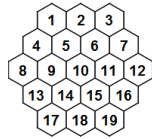
Memory limit: 1024 MB

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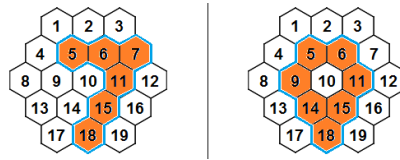
Source: ICPC SG Preliminary Contest 2018

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Alice is a queen bee living in Beeland (a honeycomb structure described by R , the number of cells of the side of honeycomb). The cells in Beeland are numbered from 1 to $R^3 - (R - 1)^3$ in row major order. For example for $R = 3$, the Beeland that Alice lives in looks like this:



Now Alice lives in a house that occupies K adjacent cells in Beeland. You are Bob, the knight bee. You need to protect Alice's house, but first you need to know the length of its **outer** perimeter (the number of outermost sides of Alice's house). The illustration below shows the visualizations of Sample Inputs/Outputs 2 and 3.



Input

The first line of input consists of two integers: R and K . ($1 \leq R \leq 50$, $1 \leq K \leq R^3 - (R - 1)^3$). The second line contains K unique integers that describe the indices of Alice's house, where each integer is in the range $[1, R^3 - (R - 1)^3]$.

Output

Print an integer in one line: The perimeter of Alice's house.

Sample Input 1

```
3 1
7
```

Sample Output 1

```
6
```

Sample Input 2

```
3 6
5 6 7 11 15 18
```

Sample Output 2

```
24
```

Sample Input 3

```
3 7
5 6 11 15 18 14 9
```

Sample Output 3

```
20
```