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## Replicants' IDs

P73645\_en

Sisè Concurs de Programació de la UPC - Semifinal (2008-06-28)

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Los Angeles. Dr. Eldon Tyrell from Tyrell Corporation has decided to identify each replicant with a number. He has chosen a set of prime numbers, and has given instructions to the workers at the factory to use as ID for a new replicant the smallest available number that can be obtained by multiplying the numbers of the set.



Given the set of prime numbers, can you compute the ID of the  $m$ -th replicant produced?

### Input

Input consists of several cases. Every case begins with an integer number  $m \geq 1$ , followed by a number  $n$ , followed by  $n$  different prime numbers. Assume  $1 \leq n \leq 10^4$ .

### Output

For every case, print the ID of the  $m$ -th replicant. This number will be smaller than  $2^{31}$ .

#### Sample input

```
1 1 2
2 1 2
3 1 2
5 4 2 5 7 3
11 4 2 5 7 3
19 4 2 5 7 3
```

#### Sample output

```
2
4
8
6
14
27
```

### Problem information

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Generation : 2025-05-14 10:47:36

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