Humble Numbers

For a given set of K prime numbers $S = \{p_1, p_2, ..., p_K\}$, consider the set of all numbers whose prime factors are a subset of S. This set contains, for example, p_1, $p_1 p_2$, $p_1 p_1$, and $p_1 p_2 p_3$ (among others). This is the set of `humble numbers' for the input set S. Note: The number 1 is explicitly declared not to be a humble number.

Your job is to find the Nth humble number for a given set S. Long integers (signed 32-bit) will be adequate for all solutions.

PROGRAM NAME: humble

INPUT FORMAT

Line 1:	Two space separated integers: K and N, 1 <= K <=100 and 1 <= N <= 100,000.
Line 2:	K space separated positive integers that compose the set S.

SAMPLE INPUT (file humble.in)

```
4 19
2 3 5 7
```

OUTPUT FORMAT

The Nth humble number from set S printed alone on a line.

SAMPLE OUTPUT (file humble.out)

```
27
```

Submit a solution:

Choose File | No file chosen   Send it in!

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