

# SCPE Spring 2025

## Euler's Multiples Redux

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You are given a list  $a_1, a_2, \dots, a_n$  of  $n$  unique prime numbers and limit  $k$ . Compute the number of integers in the inclusive range  $[1, k]$  that are multiples of one or more primes from the list.

### Input Specification

The first line of input is two integers  $n$  and  $k$ .

The second line of input is  $n$  space-separated integers: the list of integers.

### Constraints

- $1 \leq n \leq 20$
- $1 \leq k \leq 10^9$
- $2 \leq a_i \leq 100$ ,  $a_i$  is prime

### Output Specification

Output a single integer: the number of integers in the inclusive range  $[1, k]$  that are multiples of one or more integers of the list.

Sample Input	Sample Output
<pre>2 20 3 5</pre>	<pre>9</pre>
<pre>3 50 2 7 11</pre>	<pre>31</pre>
<pre>1 1000 2</pre>	<pre>500</pre>

