*In Bulgarian, “co-prime” reads out loud like the slang “How’s it goin’?”*

You are given N integers . You should answer Q queries in the form „“ which seek the following: What is the number of ordered co-prime pairs of integers modulo , whose sum is equal to ?

**Input**

First line of the file **coprime.in** reads 2 integers N and Q. The next line consists of N integers: . Q queries follow, with 2 integers each: .

**Output**

Print Q lines in the file **coprime.out** with 1 number on each – the desired count of pairs.

**Constraints**

*, except the first test where N = 1000*

*,* *except the first test where Q = 1000*

**Time limit: 1.0 sec.**

**Memory limit: 256 MB**

**Sample tests**

|  |  |
| --- | --- |
| **Input (coprime.in)** | **Output (coprime.out)** |
| 6 3  2 7 3 5 4 3  1 3  1 6  3 5 | 12  576  16 |
| 10 3  205 3485 9490 30438 437539 102 2 14373 134353 34532  1 10  2 6  3 7 | 658381034  377399215  679633769 |

**Sample test 1 explanation:**

The ordered pairs from the first query from the first test: (41, 1), (37, 5), (31, 11), (29, 13), (25, 17), (23, 19), (19, 23), (17, 25), (13, 29), (11, 31), (5, 37), (1, 41).