

Contest Duration: 2025-09-14(Sun) 22:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250914T2100&p1=248>) - 2025-09-14(Sun) 23:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250914T2240&p1=248>) (local time) (100 minutes)

[Back to Home \(/home\)](#)

[Top \(/contests/abc423\)](#)

[Tasks \(/contests/abc423/tasks\)](#)

[Clarifications \(/contests/abc423/clarifications\)](#) [Results ▾](#)

[Standings \(/contests/abc423/standings\)](#)

[Virtual Standings \(/contests/abc423/standings/virtual\)](#) [Editorial \(/contests/abc423/editorial\)](#)

[Discuss \(<https://codeforces.com/blog/entry/146333>\)](#)



F - Loud Cicada

[Editorial \(/contests/abc423/tasks/abc423_f/editorial\)](#)



Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 525 points

Problem Statement

AtCoder Island has N species of cicadas. Cicadas of species i ($1 \leq i \leq N$) have mass outbreaks only in years that are multiples of A_i .

Among the Y years from year 1 to year Y , find how many years have mass outbreaks of exactly M species of cicadas.

Constraints

- $1 \leq M \leq N \leq 20$
- $1 \leq Y \leq 10^{18}$
- $1 \leq A_i \leq 10^{18}$ ($1 \leq i \leq N$)
- All input values are integers.

Input

The input is given from Standard Input in the following format:

N	M	Y
A_1	\dots	A_N

2026-01-02 (Fri)
05:30:13 +11:00

Output

Output the answer.

Sample Input 1

[Copy](#)

```
3 2 16  
4 2 3
```

[Copy](#)

Sample Output 1

[Copy](#)

```
4
```

[Copy](#)

From years 1 to 16, each species of cicada has mass outbreaks in the following years:

- Species 1 cicadas have mass outbreaks in years 4, 8, 12, 16.
- Species 2 cicadas have mass outbreaks in years 2, 4, 6, 8, 10, 12, 14, 16.
- Species 3 cicadas have mass outbreaks in years 3, 6, 9, 12, 15.

From years 1 to 16, exactly two species of cicadas have mass outbreaks four times in years 4, 6, 8, 16.

Sample Input 2

[Copy](#)

```
2 1 122333444422333  
1429 73651
```

[Copy](#)

Sample Output 2

[Copy](#)

```
87266392324
```

[Copy](#)

The answer may not fit in a 32-bit integer.

Sample Input 3

[Copy](#)

```
20 3 832725971730072237  
19639596380058 49098990950145 32732660633430 114564312217005 68738587330203 458257248868
```

[Copy](#)

Sample Output 3

[Copy](#)

2026-01-02 (Fri)
05:30:13 +11:00

24231

Copy

Input values may not fit in a 32-bit integer.

/#telegram)

#url=https%3A%2F%2Fatcoder.jp%2Fcontests%2Fabc423%2Ftasks%2Fabc423_f%3Flang%3Den&title=F%20-

[Rule \(/contests/abc423/rules\)](#) [Glossary \(/contests/abc423/glossary\)](#)

[Terms of service \(/tos\)](#) [Privacy Policy \(/privacy\)](#) [Information Protection Policy \(/personal\)](#) [Company \(/company\)](#)

[FAQ \(/faq\)](#) [Contact \(/contact\)](#)

Copyright Since 2012 ©AtCoder Inc. (<http://atcoder.co.jp>) All rights reserved.