

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)

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)

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F - Loud Cicada

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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 ⋯ A_N
```

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Output

Output the answer.

Sample Input 1

Copy

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

Copy

Sample Output 1

Copy

```
4
```

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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
```

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Sample Output 3

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

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