

Solve the Equation

Problem Description

Given the polynomial equation:

$$a_0 + a_1x + a_2x^2 + \dots + a_nx^n = 0$$

Find an integer solution to this equation in $[1, m]$ (n and m are both positive integers).

Input

Enter a total of $N + 2$ lines.

The first line contains 2 integers, n and m , separated by a space.

The next $n+1$ lines contain one integer each. The integers are $a_0, a_1, a_2 \dots a_n$, respectively.

Output

The first line outputs the number of integer solutions to the equation within $[1, m]$.

Next, there is one integer per line, each representing one integer solution of the equation within $[1, m]$ in ascending order.

Sample Input 1

```
2 10
1
-2
1
```

Sample Output 1

```
1
1
```

Sample Input 2

```
2 10
2
-3
1
```

Sample Output 2

```
2
1
2
```

Sample Input 3

2 10

1

3

2

Sample Output 3

0

Hint

For 30% of the data: $0 < n \leq 2$, $|a_i| \leq 100$, $a_n \neq 0$, $m < 100$.

For 50% of the data: $0 < n \leq 100$, $|a_i| \leq 10^{100}$, $a_n \neq 0$, $m < 100$.

For 70% of the data: $0 < n \leq 100$, $|a_i| \leq 10^{10000}$, $a_n \neq 0$, $m < 10^4$.

For 100% of the data: $0 < n \leq 100$, $|a_i| \leq 10^{10000}$, $a_n \neq 0$, $m < 10^6$.