Problem A. Modulo Ruins the Legend

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	1024 megabytes

Grammy has a sequence of integers $a_1, a_2, \ldots, a_n$. She thinks that the elements in the sequence are too large, so she decided to add an arithmetic progression to the sequence. Formally, she can choose two non-negative integers s, d, and add $s + kd$ to a_k for each $k \in [1, n]$.

Since we want to ruin the legend, please tell her the minimum sum of elements modulo m after the operation. Note that you should minimize the sum **after** taking the modulo.

Input

The first line contains two integers n, m ($1 \le n \le 10^5$, $1 \le m \le 10^9$).

The second line contains n integers $a_1, a_2, \ldots, a_n$ ($0 \le a_i < m$), denoting the initial sequence.

Output

Output exactly two lines.

The first line contains one integer, denoting the minimum sum of elements modulo m.

The second line contains two integers s, d ($0 \le s, d < m$), denoting the integers chosen by Grammy. **If there are multiple solutions, output any.**

Examples

standard input	standard output
6 24 1 1 4 5 1 4	1 0 5
7 29 1 9 1 9 8 1 0	0 0 0