Problem B. Card Game Strategy

Input file:	*standard input*
Output file:	*standard output*
Time limit:	5 seconds
Memory limit:	1024 mebibytes

Alice and Bob are going to play a card game. There are n cards, each having an integer written on it. The game proceeds as follows:

1. Alice chooses an integer between a and b, inclusive. Call this integer t. Alice then tells Bob the value of t.
2. Bob chooses k out of the n cards. Compute the sum of the integers written on the k cards Bob chooses. Call this sum u.

Alice's objective is to make $|t - u|$ as large as possible and Bob's is to make $|t - u|$ as small as possible. Prior to the game, both Alice and Bob know the values of n, k, a, and b, and also the integers on the cards. Both Alice and Bob will play optimally. In particular, Alice will make a choice, knowing that Bob will surely minimize $|t - u|$ for told t. Additionally, assume that Alice prefers to choose smaller t if she has multiple equally good choices.

Your task is to determine the outcome of the game: the value of t Alice will choose and the k cards Bob will choose for that t.

Input

The input consists of two lines representing a single test case. The first line contains four integers n, k, a, and b ($1 \le k \le n \le 600$, $0 \le a \le b \le 1.8 \cdot 10^5$). The second line contains n integers $x_1, \ldots, x_n$ ($0 \le x_i \le 300$), denoting that x_i is written on the i-th card.

Output

Display two lines: The first line should contain an integer representing the value of t Alice will choose. The second line should contain k distinct integers between 1 and n, inclusive, representing the indices of the cards Bob will choose. If Bob has multiple equally good choices, display any one of them.

Examples

standard input	standard output
4 2 58 100 10 10 50 80	75 2 3
8 3 1300 1800 2 0 1 5 0 4 1 9	1800 4 6 8