



## D. Alex and Julian

time limit per test: 2 seconds  
 memory limit per test: 256 megabytes  
 input: standard input  
 output: standard output

Boy Dima gave Julian a birthday present - set  $B$  consisting of positive integers. However, he didn't know, that Julian hates sets, but enjoys bipartite graphs more than anything else!

Julian was almost upset, but her friend Alex said, that he can build an undirected graph using this set in such way: let all integer numbers be vertices, then connect any two  $i$  and  $j$  with an edge if  $|i - j|$  belongs to  $B$ .

Unfortunately, Julian doesn't like the graph, that was built using  $B$ . Alex decided to rectify the situation, so he wants to erase some numbers from  $B$ , so that graph built using the new set is bipartite. The difficulty of this task is that the graph, Alex has to work with, has an infinite number of vertices and edges! It is impossible to solve this task alone, so Alex asks you for help. Write a program that erases a subset of **minimum** size from  $B$  so that graph constructed on the new set is bipartite.

Recall, that graph is bipartite if all its vertices can be divided into two disjoint sets such that every edge connects a vertex from different sets.

### Input

First line contains an integer  $n$  ( $1 \leq n \leq 200\,000$ ) — size of  $B$

Second line contains  $n$  integers  $b_1, b_2, \dots, b_n$  ( $1 \leq b_i \leq 10^{18}$ ) — numbers of  $B$ , all  $b_i$  are **unique**

### Output

In first line print single integer  $k$  — number of erased elements. In second line print  $k$  integers — values of erased elements.

If there are multiple answers, print any of them.

### Examples

<b>input</b>	<a href="#">Copy</a>
3 1 2 3	
<b>output</b>	<a href="#">Copy</a>
1 2	

  

<b>input</b>	<a href="#">Copy</a>
2 2 6	
<b>output</b>	<a href="#">Copy</a>
0	

### Codeforces Round #586 (Div. 1 + Div. 2)

Finished

Practice



### → Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

[Start virtual contest](#)

### → Practice

You are registered for practice. You can solve problems unofficially. Results can be found in the contest status and in the bottom of standings.

### → Clone Contest to Mashup

You can clone this contest to a mashup.

[Clone Contest](#)

### → Submit?

Language: GNU G++11 5.1.0

Choose file: 选择文件 未选择任何文件

Be careful: there is 50 points penalty for submission which fails the pretests or resubmission (except failure on the first test, denial of judgement or similar verdicts). "Passed pretests" submission verdict doesn't guarantee that the solution is absolutely correct and it will pass system tests.

[Submit](#)

### → Problem tags

[bitmasks](#) [math](#) [number theory](#) [\\*1900](#)

No tag edit access

### → Contest materials

- Announcement #1 (en) 

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