

Dear candidate, hereby our assignment; good luck!

You can use any of the following languages to perform this task: Java,Kotlin,Scala,C++,Go. Coding best-practices should be present: code comments and unit-tests.

Complete solution should be uploaded to github and a link to the repo should be provided.

1. Inside a chipset producing factory, there are older and newer machines. Newer machines are able to produce a higher number chipsets per minute, but both new and old machines consume the same amount of energy per hour. Given a list of N machines by the number of chipsets/minute, detect the machines that should be started to produce K chipsets per minute with minimum waste. In case there are multiple solutions, all the possible solutions will be displayed.

Input file format:

First line contains the number of machines

Second line contains the chipset/minute for every machine

Third line contains number of chipsets to be produced.

Output file format :

First line contains nr of solutions

Next lines contains each solution

Last line contains the waste(nr of extra pieces)

Example input:

```
6
1 2 4 10 5 6
11
```

Example output:

```
Nr solutions=4
10 1
2 4 5
1 4 6
5 6
Waste=0
```