Numeral Systems

It's time for exams at school and everyone is studing. Ivancho has a list of tasks with diferent complexity, which he uses to exercise on. To find out which tasks are worth doing he compares their complexity with that of other tasks he has already done.

However, the tasks' complexity is expressed in a stange way - with a number in base-K positional numeral system. Ivancho doesn't know how to work with such numbers, but he knows that if he has the number $\overline{a_n a_{n-1} \ldots a_2 a_1 a_0}$, then all its digits are in the range from 0 to K-1 inclusive. Also its value can be calculated with the formula: $\sum_{i=0}^{n} a_i * K^i$ (multiply each digit with the i-th power of K, where i is the digit's position, and then add all the products together).

Help Ivancho by writing a program **basek,** which by a given **K** - the base of the numeral system, and two numbers **N** and **M** in the above numeral system, computes which number is bigger.

Input: The first row of the input file **basek.in** contains one number **K** - the base of the numeral system. The next two rows contain two strings - respectively the numbers **N** and **M**.

Output: In the output file **basek.out** you should print a single number:
0 - if N = M
1 - if N > M
2 - if N < M

Limits:
2 <= K <= 10
Every digits is in the interval [0, K).
The first digit is not zero.
The number of digits of N and M is not grater than 10^6.

Time limit: 1.0 sec.
Memory limit: 256 MB.

Remark: Reading and writing to a file can be done using the appropriate statement. You can use the freopen statement from the standart library <fstream> by adding the flowing two lines at the begining of your main function:

```
freopen ("basek.in", "r", stdin);
freopen ("basek.out", "w" , stdout);
```

Sample tests:

basek.in	basek.out
8 317022 45325	1

basek.in	basek.out
5 20313 24201	2

basek.in	basek.out
2 101010 101010	0