

LAB14-03a

Display Polynomial

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Description

Write a program that repeatedly reads the coefficient-exponent pairs, arranged in descending order by exponent and display the polynomial.

Input

The input contains several lines of integer values. In each line, there are an even number of values. Values are separated by white spaces. Every two numbers will be a pair of coefficient-exponent component. The first value of the line will be number n of pairs. The first value $c_i \in \mathbb{Z} \cap [-1000, 1000]$ in the component indicates the coefficient. The second value $e_i \in \mathbb{Z} \cap [0, 1000]$ in the component indicates the exponent. And the number of coefficient-exponent components $i \in \mathbb{Z} \cap (0, 1000]$. Then each line will form a polynomial.

For example, a line of testing data contains

$n \ c_1 \ e_1 \ c_2 \ e_2 \ c_3 \ e_3 \ c_4 \ e_4$

Output

You have to output the polynomial in descending order. If the coefficient or exponent value is 1, do not print for it.

Sample input

```
1 15 6
3 6 0 2 3 -1 1
3 -6 3 1 4 7 1
```

Sample output

```
15x^6
2x^3-x+6
x^4-6x^3+7x
```