

Yen

SEASON 8 – FOURTH ROUND



Lawrence and Holo the Wise Wolf often have to deal with all sorts of coins and currencies. In the region where they are now, there are three types of coins in circulation. They have values A yen, B yen and C yen, where A , B and C are positive whole number. They want to purchase an item that costs N yen (also a positive whole number), but they want the transaction to be exact. They have many of each type of coin and the shopkeeper, with whom they are trading, also has a lot of each type, so he can give them change.

Help Holo by writing a program which, when given values of the coins and the cost of the item, determines whether the transaction is possible and, if it is, how many coins of each time they need to pay or be given back as change.

Input

From the first line of the file `yen.in` four numbers A , B , C and N are inputted – the values of the different types of coins and the cost of the item.

Output

On the first line of the output file `yen.out` print one word – “Yes”, if the transaction is possible, and if it isn’t, “No”. If it is possible, on the next line print three numbers x , y and z , such that $xA + yB + zC = N$, if there is more than one solution, print whichever, but the following has to be true:

$$|x|, |y|, |z| \leq 10^{15}$$

Constraints

$$1 \leq A, B, C, N \leq 1000$$

Time limit: 0.2 sec

Memory limit: 256 MB

Sample tests

Input (<code>yen.in</code>)	Output (<code>yen.out</code>)	Input (<code>yen.in</code>)	Output (<code>yen.out</code>)
18 30 10 4	Yes 8 -4 -2	6 8 4 5	No