PROBLEM 1 – HOUSE NUMBERING

The government of Acmonia has decided that henceforth all house numbers should be given in binary instead of decimal notation. Householders will now have to purchase 0 and 1 binary digits to display on their houses. For reasons much too complicated to discuss here it seems that the cost to a householder of a 0 binary digit and of a 1 binary digit may well differ. Your task is to write a program which will report to householders the cost of their new numbers.

INPUT FORMAT

The input text consists of a number of sets of problems. The first line of a set is of the form "`COST a b`". For that set:

- a and b are both integers, $0 \le a, b \le 1000$,
- a 0 binary digit costs a dollars,
- a 1 binary digit costs b dollars.

The first line is followed by one or more lines each consisting of a single integer n.

- $0 \le n \le 2{,}000{,}000$,
- n indicates a house number, expressed as a standard decimal number.

A single `#` on a line indicates the end of input.

SAMPLE INPUT:

```
COST 1 1
1
34
15
COST 1 10
1
34
15
COST 10 1
1
34
15
COST 0 5
1
16
#
```

OUTPUT FORMAT

Each set of output data must begin with a single output line showing consisting of the word "`Set`", followed by a space (" "), and the current set number (counted from 1). This is followed by the cost of the binary digits for each house number, each cost being displayed as a decimal number on a separate line.

SAMPLE OUTPUT:

```
Set 1
1
6
4
Set 2
10
24
40
Set 3
1
42
4
Set 4
5
5
```