

GGCD

Euclidean algorithm is an efficient method for computing greatest common divisor (GCD) of 2 numbers, the largest positive integer that divides both of them without leaving a remainder. For example, the GCD of 8 and 12 is 4. To calculate the GCD, we could use the equation below

$$\begin{aligned}
 \text{GCD}(a,b) &= \text{GCD}(b,a) && \text{if } a < b \\
 \text{GCD}(a,b) &= \text{GCD}(b,a\%b) && \text{if } a > b \text{ and } b \neq 0 \\
 \text{GCD}(a,b) &= a && \text{if } a > b \text{ and } b = 0
 \end{aligned}$$

This problem is very simple, you just have to read N number and print the greatest of GCD (GGCD). To find GGCD, you must find the GCD of all pairs (a_i, a_j) where $i \neq j$ and find the largest GCD.

Format Input

The input starts with an integer T represents the number of test cases. Each test case will start with an integer N, the number of numbers to read. The next line will contain N integers a_i as the numbers to be read.

Format Output

For each test case, print "Case #X: Y" where X is the test number and Y is the GGCD.

Constraints

$$1 \leq T \leq 100$$

$$2 \leq N \leq 100$$

$$1 \leq a_i \leq 1\,000\,000\,000$$

Sample Input (standart input)	Sample Output (standard output)
4 5 10 25 15 30 50 4 10 11 34 22 3 1 17 33 3 5 5 7	Case #1: 25 Case #2: 11 Case #3: 1 Case #4: 5

Explanation

All pairs' GCD in Case #2:

$$\text{GCD}(10, 11) = 1$$

$$\text{GCD}(10, 34) = 2$$

$$\text{GCD}(10, 22) = 2$$

$$\text{GCD}(11, 34) = 1$$

$$\text{GCD}(11, 22) = 11$$

$$\text{GCD}(34, 22) = 2$$

Therefore, GGCD = 11