

# Trending GCD

Problem statement is simple. Given **A** and **B** you need to calculate **S(A,B)** .

$$\sigma(a=1 \text{ to } A)\sigma(b=1 \text{ to } B) (a*b*f(\text{gcd}(a,b)))$$

Here,  $f(n)=n$ , if  $n$  is square free otherwise  $0$ . Also  $f(1)=1$ .

## Input

The first line contains one integer **T** - denoting the number of test cases.

**T** lines follow each containing two integers **A,B**.

## Output

For each testcase output the value of **S(A,B) mod 1000000007** in a single line.

## Constraints

- $T \leq 1000$
- $1 \leq A,B \leq 1000000$

## Example

**Input:**

```
3
42 18
35 1
20 25
```

**Output:**

```
306395
630
128819
```