

1046 - Product Subsequence

Description

Consider a sequence of 10^3 integers, where for each position $1 \leq N \leq 10^3$ in the sequence corresponds a number given by: $(N) \cdot (N+1) \cdot (N+2)$. Then the sum of the first $1 \leq M \leq 10^3$ sequence numbers can be expressed as follows: $S = 1 \cdot 2 \cdot 3 + 2 \cdot 3 \cdot 4 + \dots + (M-1) \cdot (M) \cdot (M+1) + (M) \cdot (M+1) \cdot (M+2)$. Consider the interval of integers $[a, b]$ with $(1 \leq a \leq b \leq 10^3)$. Can you determine the sum of all the sequence numbers between a and b , they also included?

Input specification

An integer T with the number of cases in the first line of input. Each case consists of a line with two integers a and b , representing the extremes of the interval.

Output specification

One line for each case, with the sum of all the sequence numbers between a and b mod 100 .

Sample input

```
3
1 10
30 30
1 1000
```

Sample output

```
90
60
0
```

Hint(s)

Source

XXIII Copa Void de Programación -
Yonny Mondelo Hernández

Added by

ejaltuna

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Time limit (ms)

1000