How many triangles are there when they have integer length sides and all the sides are between X and Y inclusive. Two triangles differs if their side length set s are different. For example {2,3,3}, {2,3,4} and {2,2,3} are all different triangles. But {5,6,7} and {6,5,7} are not different. In a triangle the sum of smaller two sides are strictly greater than the largest side.

Input

Input starts with an integer T ($1 \leq T \leq 20000$), the number of test cases. Each test case consists of two integer X and Y ($1 \leq X \leq Y \leq 1000000$).

Output

For each test case, output the number of possible triangles whose side lengths are between X and Y inclusive.

Sample Input

```
5
1 10
5 10
5 15
10 20
100 400
```

Sample Output

```
125
55
252
285
3898600
```