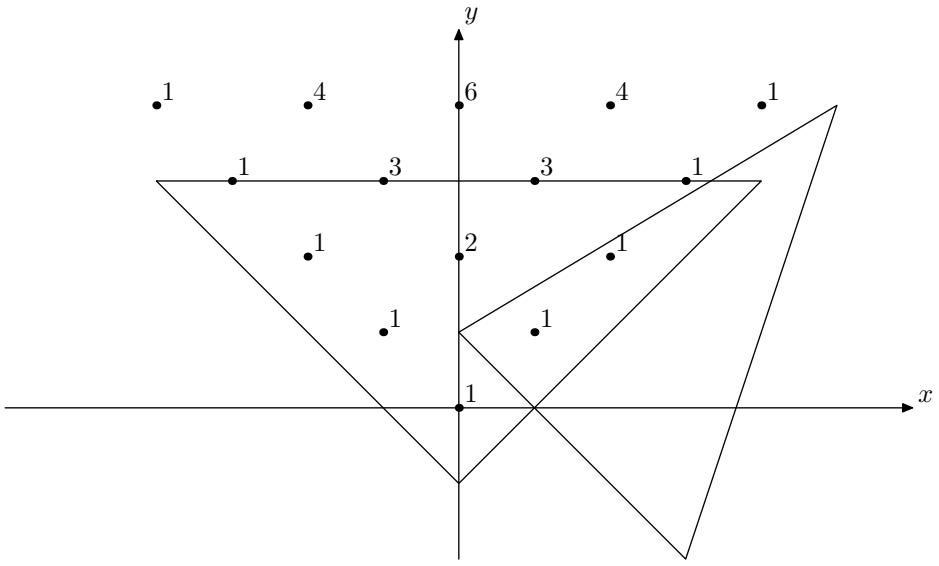
Geometrical Combinatorics

Input file:	`standard input`
Output file:	`standard output`
Time limit:	3 seconds
Memory limit:	512 megabytes

Grace is developing a brand new theory of geometrical combinatorics — a study about geometrical properties of combinatoric objects.

Consider two triangles on plane — a Pascal's triangle and an ordinary triangle. Pascal's triangle is drawn with it's root at point (0, 0), and two sides along diagonals of upper-halfplane quarters. Formally, there are 1's written in points (i, i) and $(-i, i)$, and between them at point $(-i + 2k, i)$ there is a number equal to the sum of numbers at $(-i+2k+1, i-1)$ and at $(-i+2k-1, i-1)$ for all k from 1 to $i-1$. An ordinary triangle is drawn as just a triangle with vertices at (x_A, y_A), (x_B, y_B), (x_C, y_C).



Grace defines an *intersection value* of Pascal's triangle and an ordinary triangle as the sum of values of Pascal's triangle inside or on the border of the ordinary triangle. Can you develop a program that calculates this intersection value?

Input

On the first line there is an integer t ($1 \le t \le 5$) — the number of tests to process. Each of the next t lines contains 6 integers x_A, y_A, x_B, y_B, x_C, y_C ($-10^6 \le x_A, y_A, x_B, y_B, x_C, y_C \le 10^6$). Three points in each test do not lie on a line.

Output

For each test output an integer — the intersection value modulo $10^9 + 7$.

Example

standard input	standard output
2 0 -1 -4 3 4 3 5 4 0 1 3 -2	15 2