# Shooting rectangles

**Solution**

For a rectangle, the slope of any line intersecting the rectangle is within a continues interval. This interval can be easily determined by its four corners. But there are three cases needed considering: the rectangle is above X-axis, under X-axis, or cross X-axis.

Then, the problem is equivalent to finding the minimum number of points to hit all the intervals. After sorting by their right endpoints,the problem can be solved by a greedy algorithm:

Iteratively choose the minimum right endpoint and remove all hit intervals.

There is one trap should be considered: these intervals may be in a circular form.That is, there may be intervals [oo,r] and [p,oo], and both can be hit by the line x=0. To cope with this case, we consider two cases: choosing the line x=0 or not. The final solution is the minimum of the two cases. The trap is hinted by given in the example.