

1. Segment intersection

Files: The accompanying files for this assignment are `geoc_lab1.html` and `TestLab1.json.js`.

Delivery: upload the modified HTML file and any other necessary files to the Racó.

The goal is to write a program to decide whether or not two line segments intersect, and if they do, to classify the type of segment intersection.

Recall that if two segments share an endpoint, they intersect. If two segments intersect, your program must indicate what type of intersection it is, considering whether the intersection is a point or a segment, whether the intersection point is an interior point or an endpoint, whether the intersection coincides with one of the original segments, etc. Notice that your program must be able to deal with collinear points.

Deciding how to classify all the different types of segment intersections is one of the goals of this lab.

Your program should be used to correctly classify the pairs of segments appearing in the file `TestLab1.json.js`, which are drawn in the HTML file. To that end, modify the HTML file in the area signaled with a “TODO” comment. Make sure your program uses different colors for each intersection type, and has a meaningful description for each of them.