

Constructive Geometry 2020-2021

Planar analytic geometry – homework

Given:

Planar region D is given by the following conditions

$$4x^2 + 16x - y^2 + 2y + 11 \leq 0$$

$$1 \leq y - x \leq 5$$

$$-3 \leq y + x \leq 1$$

Required:

1. Determine the boundary curves.
2. Calculate the intersections of all boundary curves and coordinate axes.
3. Calculate the mutual intersections of all boundary curves.
4. Draw the region D (use squared paper).

Note:

In case of rational coordinates, round them to one decimal number for drawing.