

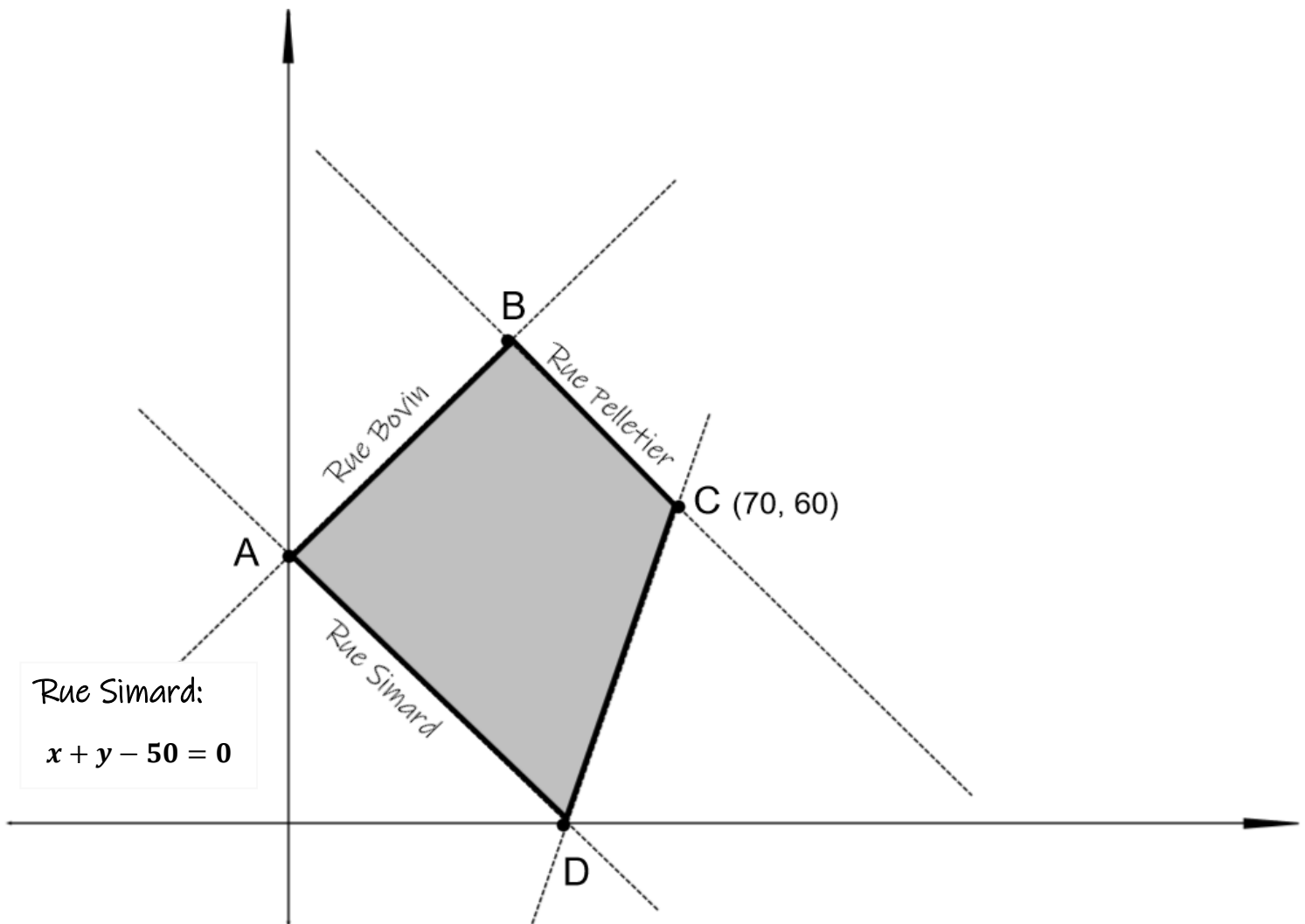
## New Residential Sector: A Situational Problem

An urban planner is a professional who plans the construction, growth, and development of an urban community. He or she manages and organizes the use of city territory in accordance with the urban plan and takes into account the needs and wishes of the citizens as well as the goals of sustainable development.

The right TRAPEZOID below represents a new residential sector. The graph is scaled in meters.

As an urban planner you must prepare and present an urban plan for this new sector to the municipal council. According to this municipality's planning program:

- This sector must be sub-divided into **six** single-family lots
- Rue Boivin is perpendicular to Rue Pelletier and to Rue Simard
- The area of four of these lots each must be *approximately* 500 m<sup>2</sup>
- Fire hydrants must be installed at points A, B and D



Your urban plan must include:

- A **diagram** (on graph paper) of the sector, including the boundaries for each lot (the boundaries must be drawn accurately but do not requires equations)
- The surface area of each lot (labelled in each section)
- The equation of the line associated with each of the **streets** identified in the graph
- The coordinates of the points corresponding to the fire hydrants

**Diagram of Streets with Section boundaries drawn**

