

Coordinate Geometry++

Description

The program is designed to draw different plane shapes, calculate their intersections, provide the possibility to solve simple geometric construction exercises digitally.

Inspired by a program called GeoGebra, the shapes can be entered with the mouse, the edits can be saved to a file and be restored.

Features

- scrollable, zoomable coordinate system
- shape drawing:
 - point
 - line
 - circle
- intersection point calculation:
 - line – line
 - circle – line
 - circle – circle
- special line construction:
 - parallel
 - perpendicular
 - angle bisector
 - tangent (to circle)

User interface

The program is extremely user-friendly.

You can save and load edits in the file menu.

The edit menu allows you to delete the current edits and close the program.

At the top, you can select the shape you wish to construct and then click on the coordinate system to create it.

Later you can click on the shapes to select them and then delete or move them.

The shapes are dynamic, i.e. if the shapes that define them change, they will be updated automatically (so if the centre of the circle moves, so does the circle).

Parallel and perpendicular edits are made by first clicking on a line, then on a point (or an empty area where a new point is created).

When constructing an angle bisector, the two angle arms have to be selected.

To construct a tangent drawn to a circle, first click on the circle, then select a point.

If you press ESC while constructing a shape, the creation is aborted.

Special lines (parallel, perpendicular, angle bisector and tangent) can only be constructed to normal lines (so not to other special lines).

Multiple shapes can be selected, by holding down CTRL or SHIFT.

The key combination CTRL+A selects everything.

The DEL key deletes the selected shapes.

CTRL+S allows you to save, and CTRL-O allows you to open edits.

Save and export

The document (which contains the definition of the shapes) can be saved to a text file with the extension .gae and can be restored (you do not need to add the .gae ending when entering the name).