Abstracts / Résumés

Find the shortest path? Thanks to graph theory ! !
Antonella Petrucca, for Uitwiskeling

We consider the classical problem "Seven Bridges of Königsberg" to introduce and explain the notion of eulerian graph. Then we will present a real-life application for finding the shortest path among several given locations.

"Rallye mathématique des collèges", an out of class activity
Juliette Quinque, François Recher and Sandrine Vancayselle, for IREM of Lille

Every year more than 10 000 pupils take part in an out of class activity proposed by the IREM of Lille. We will quickly present this event and explain the motivations of the group that conceives the statements. Then we will propose you to experiment with some statements.

The logical reasoning in mathematics C
Henk Hietbrink, for the Freudenthal Institute

In the Netherlands, we distinguish between different kinds of mathematics for different groups of pupils. Mathematics C is a new mathematics curriculum preparing for university studies like law, language, sociology, and arts.

The development program started in 2012. Pilot exams started in 2015. Official program since 2018. Its curriculum is very different from Mathematics B which prepares for technical universities and university studies like mathematics, physics. Mathematics C has an 80% overlap with Mathematics A which prepares for university studies like economics and medicine and pharmacy. Logic is new.

During the workshop, we will investigate the teaching material, exercises, and exams.
http://www.fransvanschooten.nl/fvs_louvain_2019_add.htm

"Exploratio" to learn fractions
Thérèse Gilbert and Julie Saelen, for the GEM

In recent years, the GEM has often focused on students' difficulty in perceiving the meaning of fractions and operations on fractions. Various works led to the creation of a didactic device : ExploRATIO.

ExploRATIO includes manipulative and reflective activities that allow you to work on the meaning of the fraction, the comparison of fractions, the passage of the division to the fraction bar, the transition from "from" to "times" as well as operations on fractions.

This workshop proposes to test this material, and to show how it can help to understand the concepts and its limits, while evoking the tests carried out in classes.