

The EuroMath portal, <https://www.euromath.eu>, fulfills four main purposes: 1. provides information; 2. provides EuroMath tool software; 3. collects, publishes and provides mathematical open educational resources; 4. facilitates communication between the teacher and students through a discussion forum.

## Information sources on the portal

- **Information** menu (Fig.1) leading to: EuroMath project (EuroMath project page); information about the EuroMath technology (*About EuroMath*); information about open licenses (*Licences*); current information related to the project, results, events (*News*); Informational resources in attached files; and FAQ.
- **Menu: EuroMath tools** (clicked on the caption) displaying information about the software contained in the Catalog, Fig.2; Educational Resources (clicked on the caption) displaying information about open mathematical resources in the repository (Fig.3).
- **Catalog submenu of the EuroMath Tools** menu: Three EuroMath applications' descriptions and access requirements along with links to Quick Start Guides and instructional videos, Fig.4.

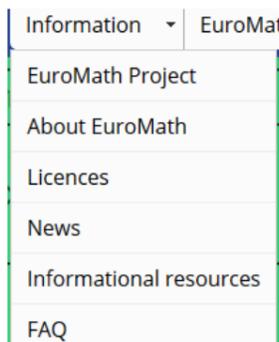


Figure 1

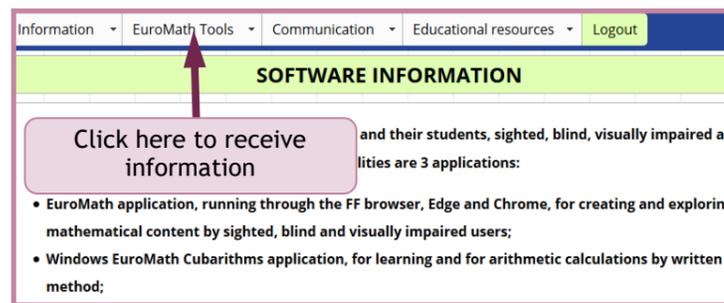


Figure 2

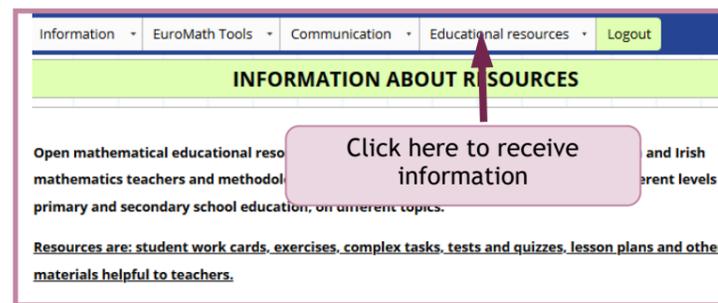


Figure 3

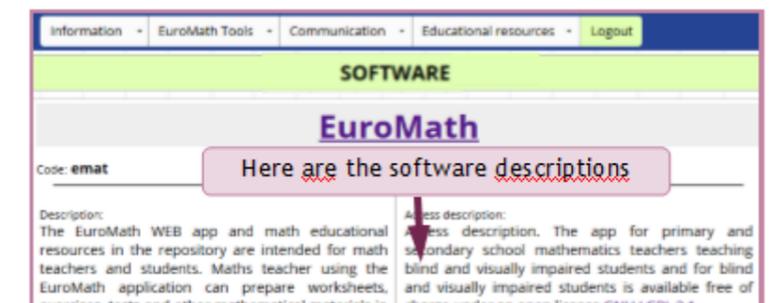


Figure 4

## 2. EuroMath utility software (EuroMath Tools menu, Catalog submenu)

- The EuroMath web application (Fig.5), in two language versions PL and EN, consists of several functional modules such as 4 formula editors, formula navigator, graphic editor, graphic navigator, quiz editor; the demo version application is available without registration via the link in the *Catalog* submenu, the full version is available after registering on the portal and specifying the role, and then after logging into the application that is launched after pressing the link in the *Catalog* submenu; the *Catalog* contains a brief description of the application and links to video tutorials and Quick Start Guides;
- The EuroMath CUBARITHMS application (Fig.6), in two language versions PL and EN, is installed in Windows 8/10 in the EuroMath group together with a manual and uninstaller;
- The EuroMath CALCULATOR application (Fig.7), in two language versions PL and EN, is installed in Windows 8/10 in the EuroMath group together with a manual and uninstaller. The *Catalog* contains descriptions of both applications, access conditions and links to manuals (.pdf). The link allows you to download the application installer.



Software Catalog with descriptions

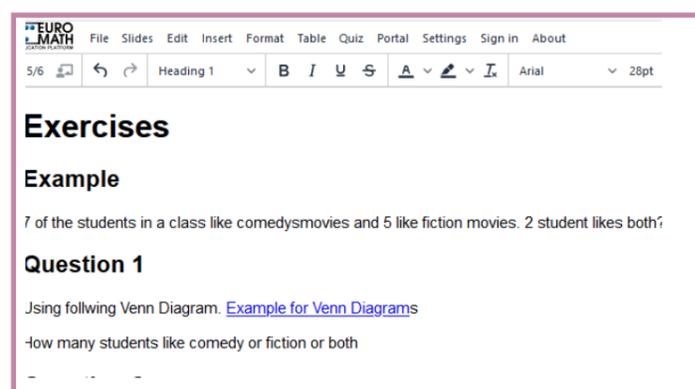


Figure 5 EuroMath application



Figure 6 CUBARITHMS application

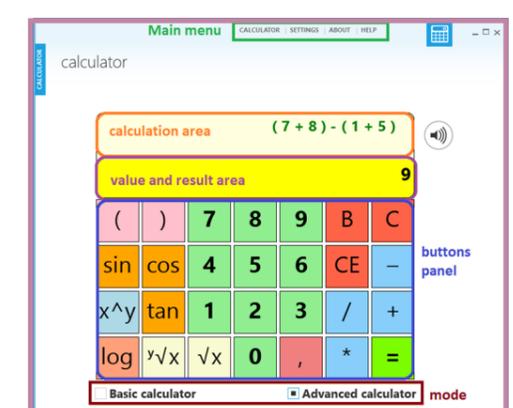


Figure 7 CALCULATOR application



### 3. Mathematical open educational resources

- When you are a registered and logged on to the portal, you have free access to educational resources, which include materials for students and teachers, for example student worksheets, exercises, tests, quizzes, theory and methodical materials such as lesson plans or instructions NVDA and JAWS screen readers.
- These resources can be accessed from the *Educational Resources / Find and order publications* menu. A list (Fig.8) of English-language resources is displayed. The user can order resources in ascending or descending order by title, author and date by clicking on the captions of columns containing these parameters. On the right side of each list item is a button called "Details"—detailed data about the resource (Fig.9), among others subject and level of education.
- At the bottom and top of the list is the *Advanced search* button invoking the search engine (Fig.10). A similar resource search engine can be found in the EuroMath application. The search engine searches for resources by language, dictionary, title, author, dates and student visual disability (B— for blind, LV— for Low Vision, CVI— for Cortical Visual Impairment; S— for Sighted).

**Educational resources**

**Find and order publications**

**My library** ← The resources selected by you are located here in *My library* and the Download button saves them to disk as .epub files (Fig.11).

**My publications** ↑ My publications contain resources of your authorship. You can save the material you created in the EuroMath application to the repository, where it will become a public good, after approval by the administrator as a reviewer. Once approved, it will become visible both from the EuroMath application and from the portal, for teachers and students.

Find and order publications

Title	Author	Description	Publication date	Details	Choose
2A Calculation rules with powers	Annemiek van Leendert	In this worksheet the calculation rules with powers are represented in the Dutch pre-braille notation.	20/11/2019 09:49	Details	Choose
2B Calculation rules with powers	Annemiek van Leendert		20/11/2019 09:50	Details	Choose
3A Intersection points of graphs (AllerCalc)	Annemiek van Leendert	This worksheet shows how to calculate points of intersections of the graphs			
4 solving quadratic equations					
6 Permutations and faculties using Alle					
9 Remove single brackets using the mu					
10 Remove double brackets using the r					
11A Measure angles for braille readers					
11B measure angles for partially sighte					
12 How do you factor out brackets with					

Figure 8 Lista zasobów

**Publication metadata**

Title: 3D shapes and net recognition

Description: English

Language: English

Author: Azadeh Nazemi

Creation date: 25/05/2019 22:00

Modification date: 20/11/2019 10:02

Publication date: 20/11/2019 10:02

Status: Accepted

Reviewer: Małgorzata Rubin

Repository: EuroMath

Publisher: CC BY NC SA

Rights: ie

Dictionary: ie

**Curriculum metadata**

Strand: Number

Topic: Length, area and volume

Cycle/Class: Secondary - Leaving Certificate

Subtopic: Investigate the nets of prisms, cylinders and cones

Level: Ordinary Level

Assignment: B, LV

Close

Figure 9 Detailed data about the resource (metadata)

**Advanced search template**

**Basic metadata**

Title: [ ] Description: [ ] Author: [ ]

**Curriculum metadata**

Dictionary: [ ]

**Flags**

Blind (B)  Low vision (LV)  Cortical visual impairment (CVI)  Sighted (S)

**Date metadata**

Created before: [ ] Created after: [ ] Modified before: [ ]

Modified after: [ ] Published before: [ ] Published after: [ ]

**Other metadata**

Language: [ ] Reviewer: [ ] Rights: [ ]

Updater: [ ]

Search Cancel

Figure 10 Resource search engine

**My library**

Title	Author	Order status	Order date	Details	Download
13 Tricks and Tips for Doing Arithmetic in Your Head	Annemiek van Leendert	accepted	26/03/2020 12:58	Details	Download
15 A Addition, subtraction and multiplication of numbers using the digit-based calculation	Annemiek van Leendert	accepted	26/03/2020 13:57	Details	Download
Translations, graph the image-movement	Azadeh Nazemi	accepted	26/03/2020 14:32	Details	Download
Vertex of parabola	Azadeh Nazemi	accepted	26/03/2020 14:33	Details	Download

Figure 11 List of selected resources to save to disk with the Download button

### 4. Discussion forum for teachers and students

- The Forum is available from the *Communication* menu.
- The Forum assumes topics (concerning discussions, consultations), and the discussions or consultations are conducted by means of sending messages.
- In the *Communication* menu there is a submenu *Contact* with contact details.



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For enquiries relating to this document, please contact [euromath@nask.pl](mailto:euromath@nask.pl)



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