



# Mogu li učenici i nastavnici komunicirati *online?*

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UMKOM Koprivnica

*Online*  
okruženje  
naših učenika



# BYOD

Bring your own devices!

Francuska



Estonija



# Web 2.0 alati



# Kako krenuti?

<http://e-laboratorij.carnet.hr/>

The screenshot shows the website interface for e-laboratorij.carnet.hr. At the top left is the logo with three gears and the text "e-laboratorij". The navigation menu includes: POČETNA, E-LABORATORIJ, ALATI (with a dropdown arrow), INTERAKTIVNI SADRŽAJI, TIPS&TRICKS, NOVOSTI, PREDLOŽI ALAT, and KONTAKT. Below the navigation is a search bar labeled "Pretraži" with a magnifying glass icon. A date bar on the right shows social media icons and the date "13. kolovoza 2018".

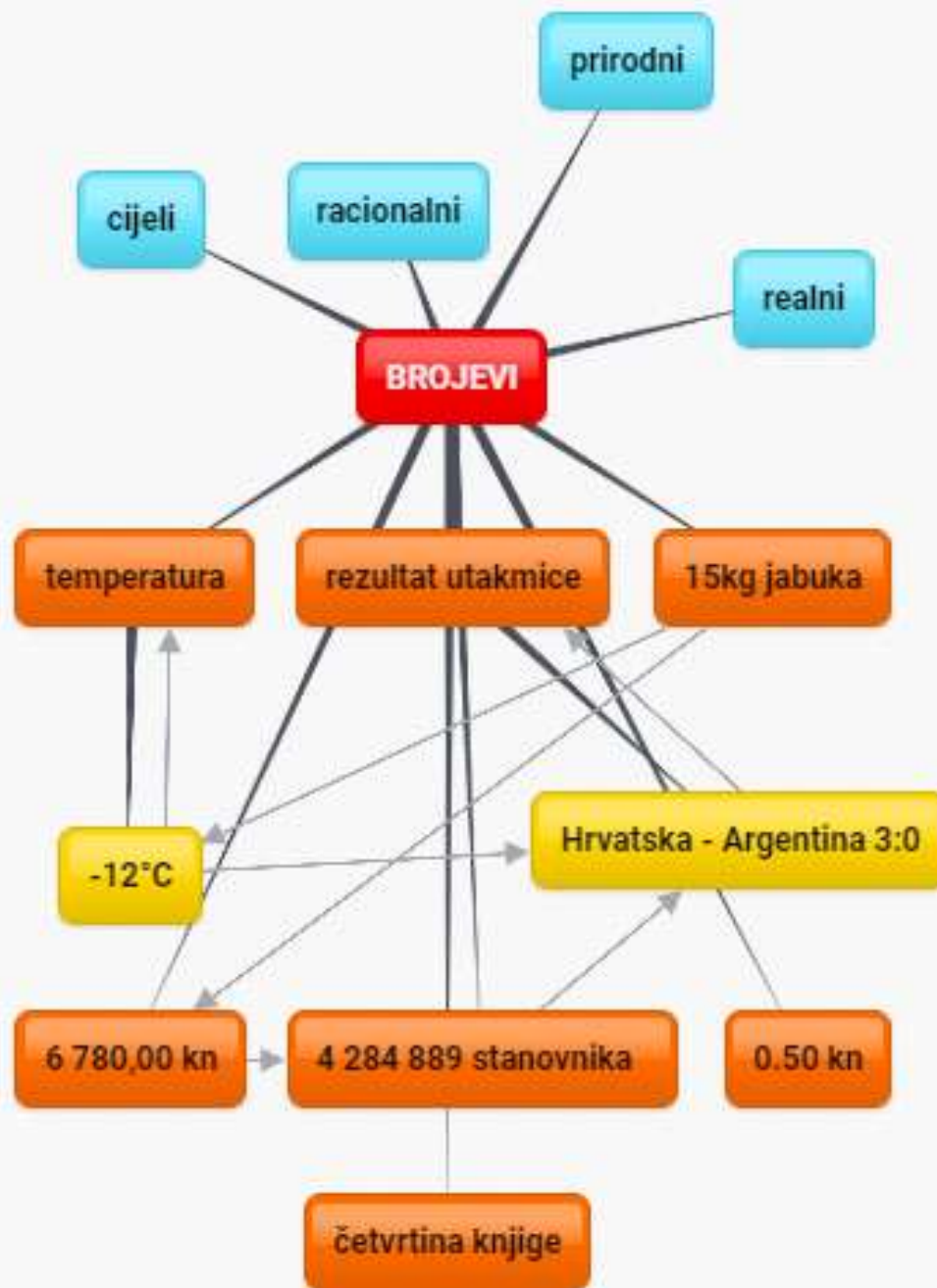
The main content area features a dropdown menu under "ALATI" with the following items: KOMUNIKACIJA I KOLABORACIJA, ANKETE/KVIZOVI, MULTIMEDIJA, SUSTAVI ZA E-UČENJE, DRUŠTVENE MREŽE, IGRE, IZRADA DIGITALNOG SADRŽAJA, MOBILNE APLIKACIJE, and OSTALO. Below the menu are two article previews:

- MOBILNE APLIKACIJE**  
Photomath – alat koji matematiku čini jednostavnom
- ANKETE/KVIZOVI**  
Testmoz – brzo i jednostavni kvizovi

At the bottom right, there is a preview for **IZRADA DIGITALNOG SADRŽAJA** titled "ChemSketch – crtanje kemijskih spojeva pomoću računala", which includes a chemical structure diagram of isobutane (C<sub>4</sub>H<sub>10</sub>) and a date of "31. listopada 2017".

A purple button at the bottom left says "Novo iz e-Laboratorija". Navigation arrows are visible at the bottom right.

# Primjer 1. uvodni dio sata



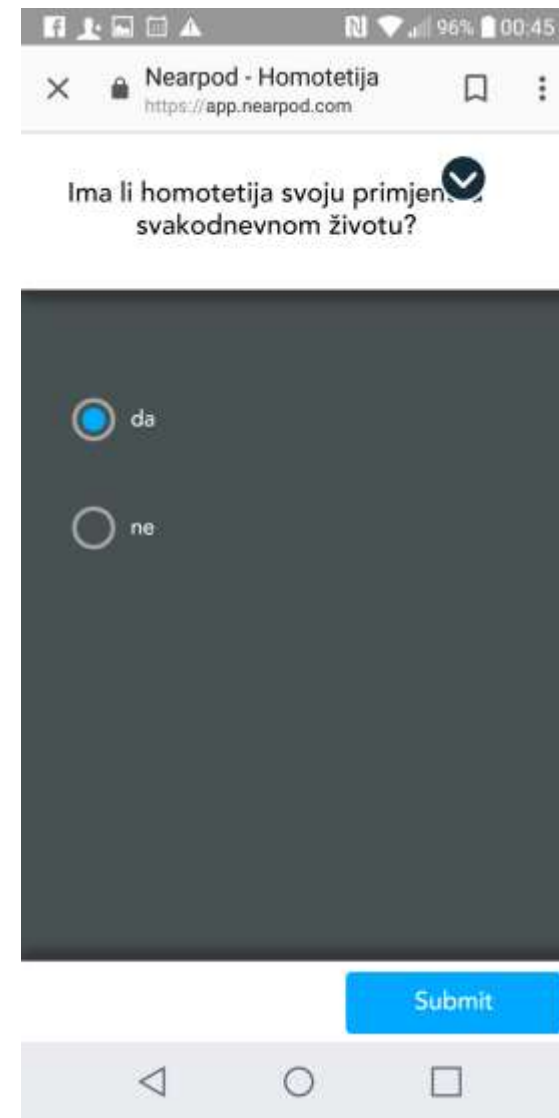
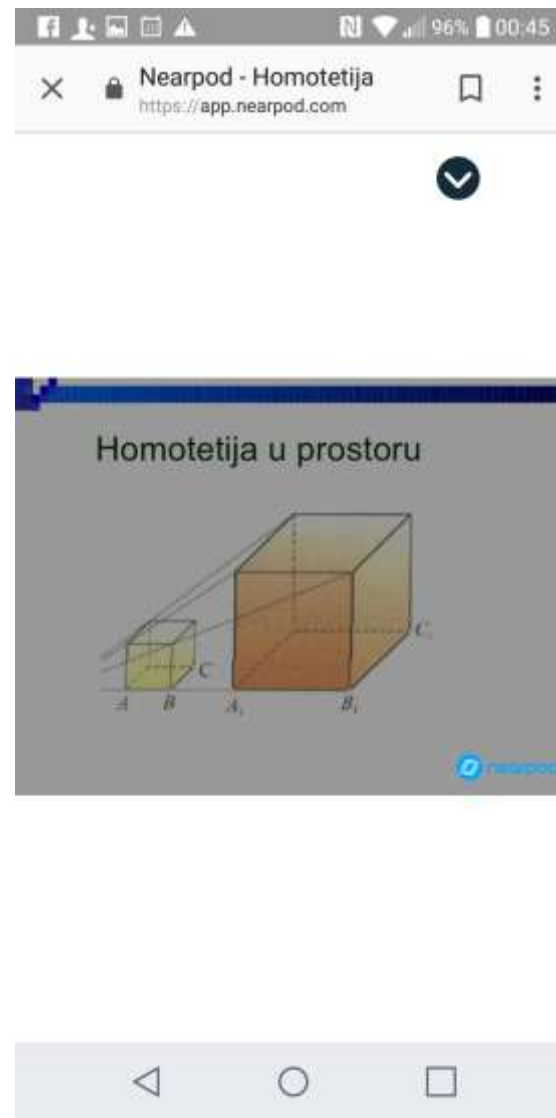
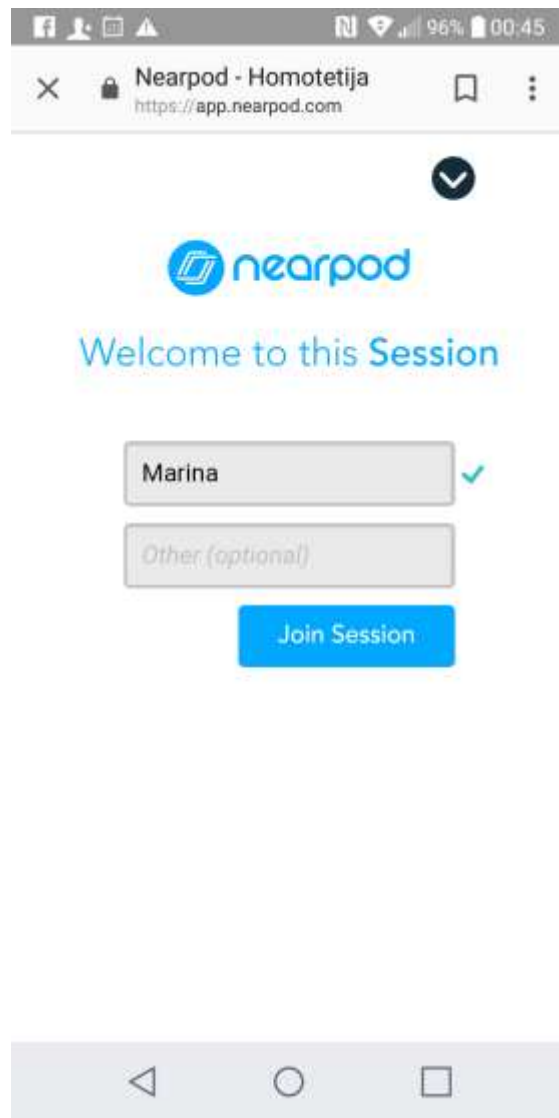
Korišten bubbl.us

Mindmeister  
Mindomo

**bubbl.us**  
Brainstorming made simple



# Primjer 2. obrada gradiva





CODE: TEWAI

nearpod

+ Add Activity

Beta



Ima li homotetija svoju primjenu u svakodnevnom životu?

New! Use Student View to see this lesson from your students' perspective.

Got it



Student

A

B

Marina



100

A DA

0

B NE

0

C NO ANSWER



3 of 6



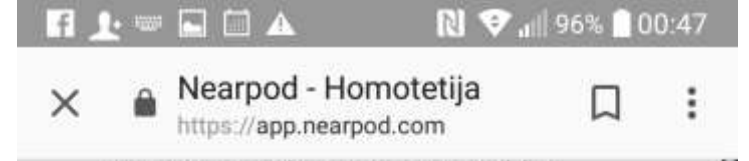
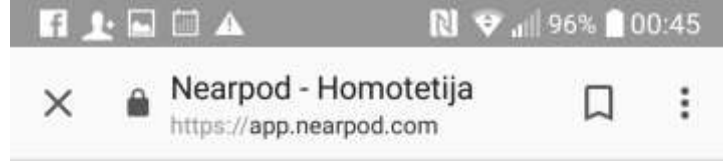
Hide Student Names



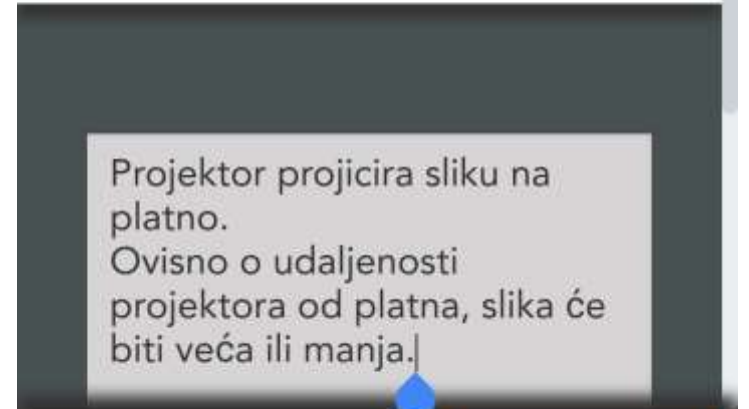


<https://nearpod.com>

Sličan alat: Pear Deck



Opiši vezu homotetije i slike projektora!



Submit



# Kako to funkcioniira u razredu?

- Eksperiment!

• [www.menti.com](http://www.menti.com) CODE: **82 46 35**

• [www.mentimeter.com](http://www.mentimeter.com)

The screenshot displays the Mentimeter web interface. At the top, the navigation bar includes the Mentimeter logo, the presentation title "Matematički mot...", and utility buttons for Templates, Theme (New), Configure, Help, Saved, and Present. The main content area shows a poll question: "Koristite li pametne telefone ili tablete u nastavi?" with two options: "da" and "ne". Above the question, it instructs users to go to [www.menti.com](http://www.menti.com) and use the code 82 46 35. The interface also features a sidebar on the left with a thumbnail of the current slide and buttons for "New Slide" and "Import". On the right, a settings panel is visible, showing the question type as "Content", a notification about previous session results, and the question text with its options. A "Pro tip" at the bottom suggests using the settings menu during presentation.

## Primjer 3. postavljanje pitanja

- Mentimeter 

- Plickers



- Tricider



- AnswerGarden 

- Prikupljaju odgovore
- Statistička obrada podataka

# Primjer 4. kvizovi i testovi



- Wordwall



- Kahoot [www.create.kahoot.it](http://www.create.kahoot.it) (za učenike [www.kahoot.it](http://www.kahoot.it)  
niži razredi Popular Math Situation)

zaigrajmo Kahoot

- Wizer me <https://app.wizer.me/preview/g6GGF> preuzet sa <https://app.wizer.me>



- Bookwidgets
- Testmoz



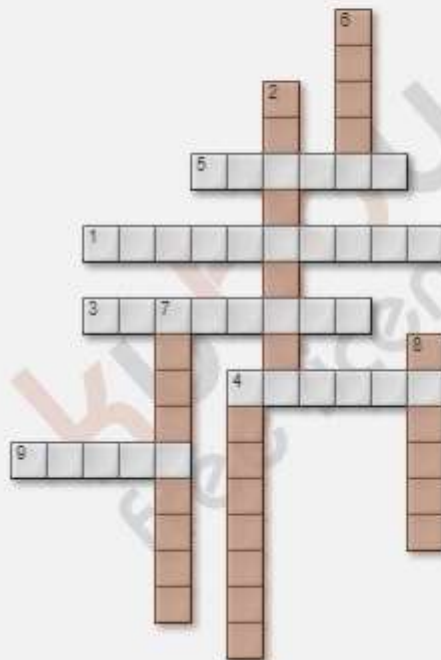
#	Delete	Question	Point(s)
1.	<input type="checkbox"/>	Why did the babies get sick?	1
2.	<input type="checkbox"/>	What was Esperanza's duty at the...	1
3.	<input type="checkbox"/>	What did Miguel call Esperanza?	1
4.	<input type="checkbox"/>	Esperanza was very unselfish in...	1
5.	<input type="checkbox"/>	When Papa died, Esperanza's uncles...	1

Navigation: Home Settings Questions Publish Reports Logout

Buttons: Add New Question Update

# Križaljke

- Kubbu



## ACROSS:

1. plohe su mu pravilni peterokuti
3. nastaje spojimo li dva tetraedra
4. ima dvije baze, a pobočje joj se sastoji od paralelograma
5. izgleda kao rođendanska kapica
9. pravilni poliedar (po njoj nazivaju vatrene)

## DOWN:

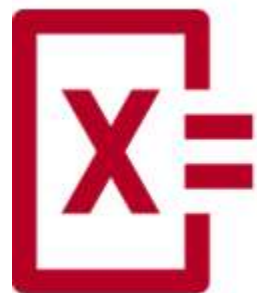
2. ima 20 ploha oblika jednakostraničnih trokuta
4. Keopsova
6. kažu da je Zemlja:
7. pravilna trostrana piramida
8. oblik cijevi

- GeoGebra groups [www.geogebra.org](http://www.geogebra.org)

The screenshot shows a web browser window displaying a GeoGebra group stream. The browser address bar shows the URL <https://www.geogebra.org/group/stream/id/Vk4UZnJs5>. The page header includes the GeoGebra logo and the user name 'Marina Njeri'. The stream is titled '2.a 2017./18' and has tabs for 'Objave', 'Članovi', 'Materijali', and 'Vrednovanje'. Two posts are visible, both titled 'Graf logaritamske funkcije' and marked as 'Krajnji rok 23. velj'. Each post includes a graph of a logarithmic function and a text prompt 'Rješi zadatak'. The first post is labeled '7. Rješi zadatak' and the second '6. Rješi zadatak'. Both posts show a score of 23/23 and a status of 'Upišite komentar...'. The browser's address bar and bookmarks are also visible at the top.

## Primjer 5. domaća zadaća

Oprez!



photomath  
by microblink





Grački Kalkulator M... 4,5★  
Mathway 4,2★  
Specijalni kalkulator ek... 4,3★



Pipe and Fitting 4,4★  
Graphing Calculator 4,6★  
Scientific Calculator - F... 4,6★



Advanced calculator fx ... 4,7★  
Free engineering c... 4,6★  
Jedinica pretvarač - B... 4,3★



Строительны  
Chord length  
MechTab



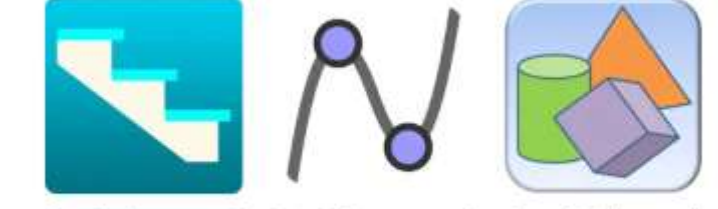
pretvarač jedinica 4,5★  
Periodične Sustav 2018 4,9★  
Triangle Calculator 4,3★



The area of geometric fig... 4,3★  
ArcCalc 4,6★  
Metal Weight Calculator 4,5★



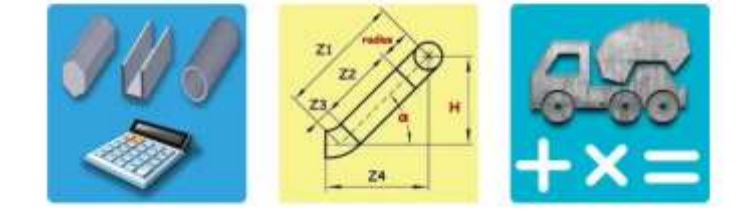
Hydraulic CALC 4,7★  
Геометрия 4,3★  
Volume & Surface Area ... 4,1★



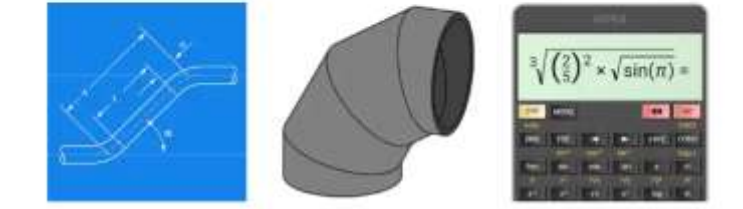
Fast Stairs  
GeoGebra  
Area & Volume



Trigonometry Calculator 4,3★  
CalcKit: All-in-One Calculat... 4,7★  
Protractor 4,3★



Metal kalkulator tež... 4,7★  
easy Pipe fitter 4,5★  
Kalkulator Betona 4,5★



Pipe Guide Calculator 4,1★  
Flat Pattern Bend 4,7★  
HiPER Scientific Cal... 4,6★



Effortless  
Physical laws  
Euclidea






Google Play

# Video instrukcije

**SCREENCASTOMATIC**

 **ezvid**

  
**Screen Recorder**  
from Rylstim

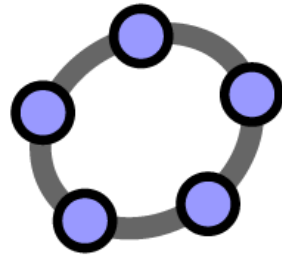
**screenr**

 **DVDVideoSoft**  
**Free Video Screen Recorder**  
[www.downloads4pc.com](http://www.downloads4pc.com)



<http://www.racunalo.com/top-5-najboljih-besplatnih-aplikacija-za-snimanje-ekrana/>


# Digitalni udžbenici



- GeoGebra
- Tika Tok
- Mixbook
- Blurb
- Zooburst
- StoryJumper
- StoryBird
- FlipSnack


<https://www.geogebra.org/m/MjV6DBrw>



 **The Pythagorean Theorem**  
Created by [ncarlx24](#) on April 02, 2011

Ads by Google   Adobe Flash Player   Students   Cancel Contract   Cancel Membership

**ZooBurst**   We're sorry, but it looks like you don't have a webcam. Augmented Reality mode has been disabled.   Enter Fullscreen



The pythagorean theorem is used to find the area of a right triangle in mathematics. In order to use it, you must have two different lengths of the



# Plakati

- GlogsterEDU
- Canva
- Poster My Wall
- Posterini
- Easelly
- Tagul
- Toondoo
- Photoscape
- ImageChef.com
- Smilebox
- Storyo
- Animoto
- Kizoa
- Fotonea
- Photovisi
- BeFunky
- infogr.am

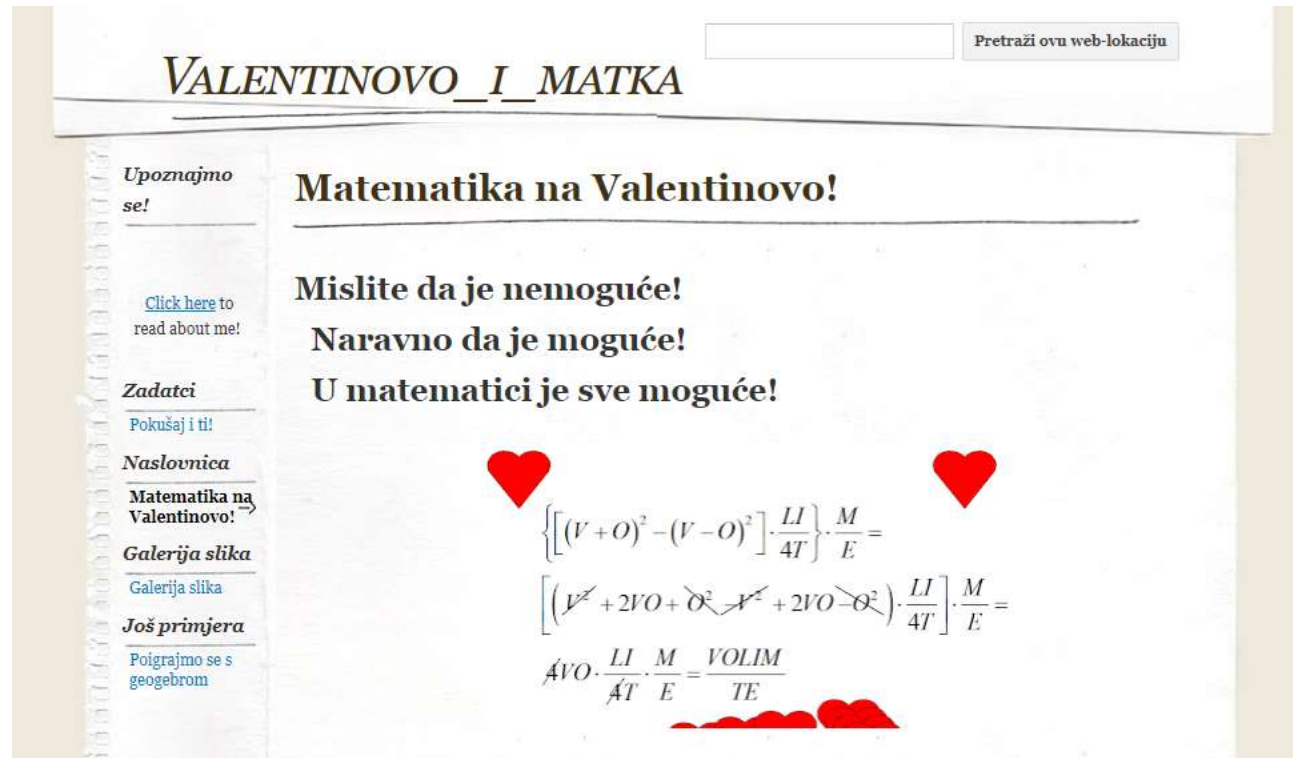


Glogster  
EDU



# Web stranice

- Wix  <http://marinanjers.wixsite.com/umkom>
- SimpleSite 
- Weebly 
- GoogleSites  <https://sites.google.com/site/valentinovoimatka/>



**VALENTINOVO\_I\_MATKA**

Upoznajmo se!  
[Click here to read about me!](#)

Zadaci  
Pokušaj i ti!

Naslovnica  
**Matematika na Valentinovo!**

Galerija slika  
[Galerija slika](#)

Još primjera  
[Poigravamo se s geogebrom](#)

**Matematika na Valentinovo!**

Mislite da je nemoguće!  
Naravno da je moguće!  
U matematici je sve moguće!

$$\left[ \frac{(V+O)^2 - (V-O)^2}{4T} \right] \cdot \frac{M}{E} =$$
$$\left[ \frac{V^2 + 2VO + O^2 - V^2 + 2VO - O^2}{4T} \right] \cdot \frac{M}{E} =$$
$$\frac{4VO}{4T} \cdot \frac{M}{E} = \frac{VOLIM}{TE}$$

# Primjer 7. izvan učionička nastava

- Projekt: Matematička šetnja Koprivnicom  
(upute: <https://goo.gl/aH38AP>  
1. zadatak: <bit.ly/CIKC1zadatak> )



- QR generator
- QR reader

bitly

- Bit.ly
- Google disk
- Padlet
- Galerija

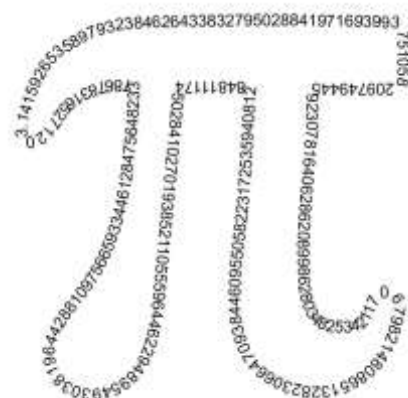
A screenshot of the Bitly dashboard. The top navigation bar includes the Bitly logo, a search bar, a 'CREATE' button, and a user profile icon. The main dashboard area shows analytics for 'TOTAL CLICKS' (10), 'TOP REFERERS' (10 Email, SMS, Direct), and 'TOP LOCATION' (10 Croatia). A central message states 'No data to report'. Below this is a list of links with columns for 'Date Created' and 'Clicks all time'. The first link is 'Uputnik ŽSV, 9.6.2018.' with 21 clicks. A detailed view of this link is shown on the right, including the original URL and a 'COPY' button. A chat window on the bottom right shows a message from 'Seran from Bitly' regarding updated Terms of Service.

# Matematička šetnja Koprivnicom

23.8.2018. 21:13



# Potruga za rješenjima



QR kod  
Slideshare

Kodovi zadataka  
su dostupni na [linku](#).



# Primjer 8. projekti

- eTwinning
- Twinspace
- Sigurno okruženje
- Facebook za projekte



A screenshot of the eTwinning website interface. The top navigation bar is yellow and contains the eTwinning logo, "Portal", "eTwinning Live", "Moja, a Tvoja - MaTeMaTika...", "hrvatski", and "Odjava". Below this is a brown navigation bar with links: "POČETNA STRANICA", "STRANICE", "MATERIJALI", "FORUMI", "UŽIVO", and "ČLANOVI". The main content area has a breadcrumb trail: "Početna stranica » Stranice » Stereometrija". The title of the project is "Moja, a Tvoja - MaTeMaTika". On the right, there is a "POSTAVKE" gear icon, a welcome message "Dobro došli Marina Njerš" with a profile picture and an email icon, and a "Uredite stranicu" link. The main content area is divided into two columns. The left column is titled "Stranice" and contains a list of links: HOME, Pravila ponašanja na internetu, UPOZNAJMO SE ..., LOGO, VEČER MATEMATIKE ..., MATERIJALI ... (with sub-links for Kompleksni brojevi - fraktali, Kvadratna jednačba i kvadratna funkcija, Trigonometrija pravokutnog trokuta, Eksponecijalna i logaritamska funkcija, and Stereometrija), ZBIRKA ZADATAKA, and Sretan Božić!. The right column is titled "Stereometrija" and features a photograph of a wooden roof structure. At the bottom of the page, there is a status bar with "Waiting for chat.eun.org...", "Gimnazija 'Fran Galović' Koprivnica", and "1 član je online".

# Više o alatima

webinari

- EuropeanSchoolnet
- Coursera
- Alison
- e-twinning

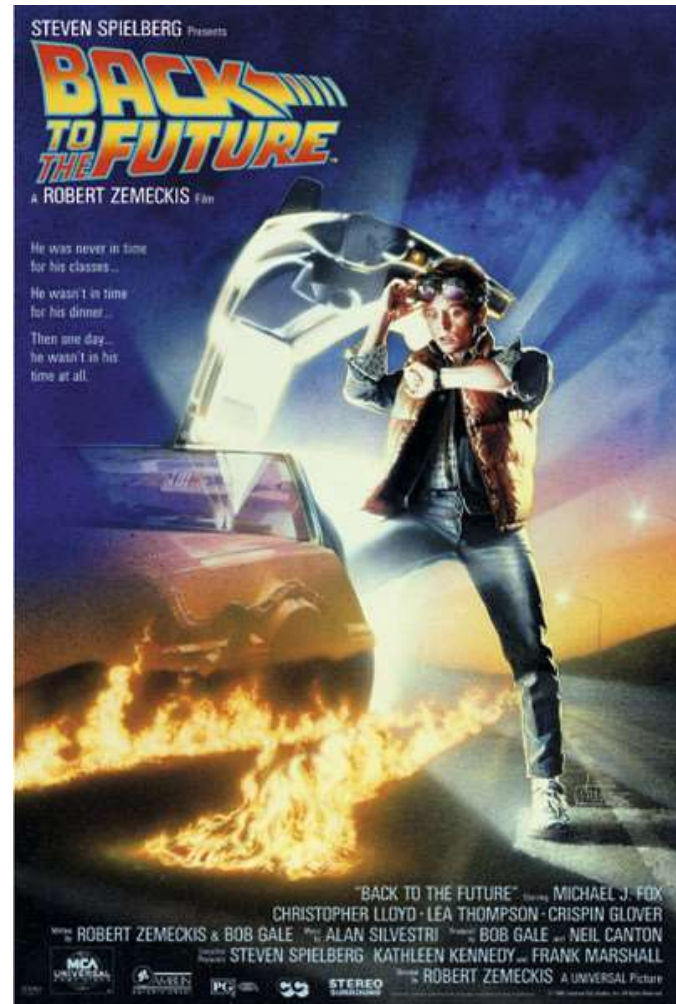
(knjiga [bit.ly/knjigaWebalati](http://bit.ly/knjigaWebalati) )



**coursera**



# Povratak u budućnost 😊



<https://edutorij.e-skole.hr/share/page/dos-eskole>

## Umjesto zaključka

JA **NISAM** ZAGOVORNIK  
TEHNOLOGIJE.  
JA **SAM** ZAGOVORNIK  
PEDAGOGIJE,  
RAZUMIJEVANJA NAČINA NA  
KOJI LJUDI UČE I NAJBOLJIH  
METODA UČENJA.

ALI, TEHNOLOGIJA DOISTA  
OMOGUĆUJE NEKE ZANIMLJIVE  
PROMJENE.

DONALD A. NORMAN

PITANJA

HVALA!

[marina.njers@skole.hr](mailto:marina.njers@skole.hr)