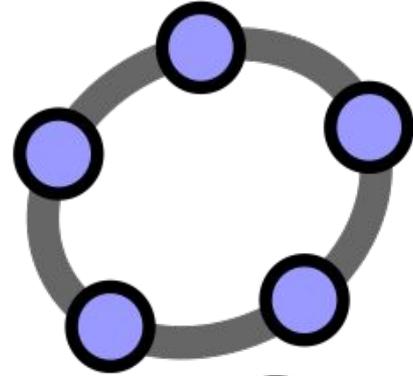


Features & Possibilities -An Overview

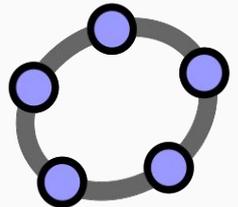
By Sangeeta Gulati
National ICT Awardee
Sanskriti School, New Delhi



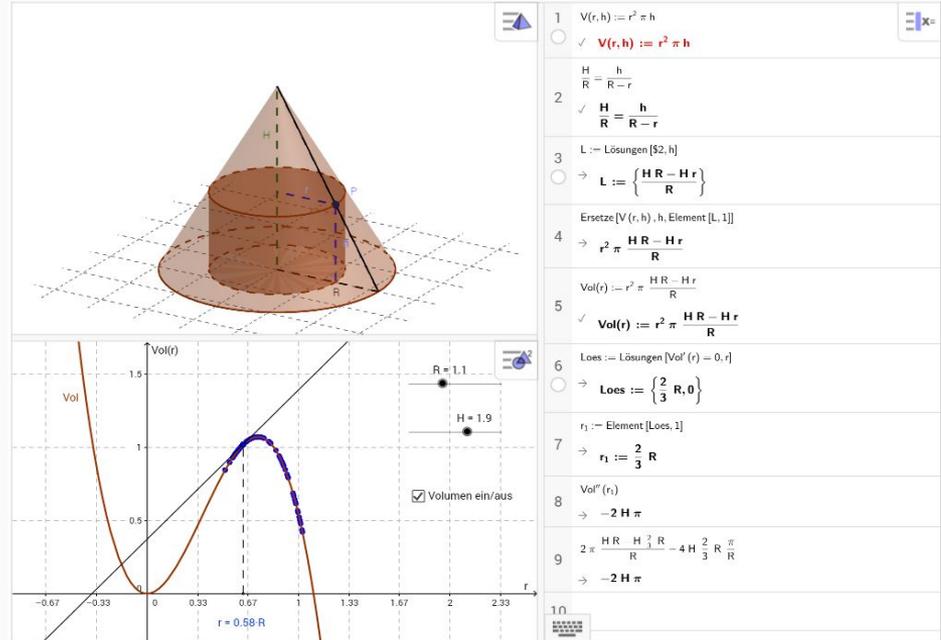
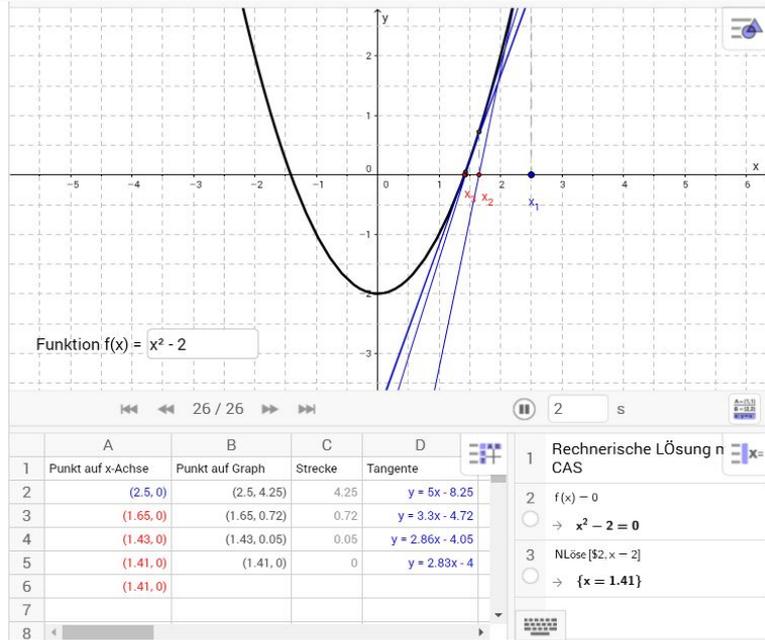
GeoGebra

What is GeoGebra?

- GeoGebra is a dynamic mathematics software for all levels of education that brings together geometry, algebra, spreadsheets, graphing, statistics and calculus in one easy-to-use package.
- Open source software freely available for non-commercial users. Download available at www.geogebra.org
- Tasks in GeoGebra may be designed to enable students to make conjectures and understand mathematical concepts.



GeoGebra = Geometry + Algebra + Spreadsheet + 3D + Statistics



GeoGebra Apps

www.geogebra.org/download



Scientific



Geometry



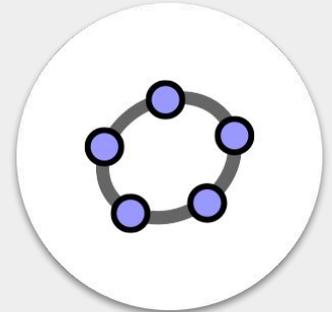
Graphing



3D



CAS

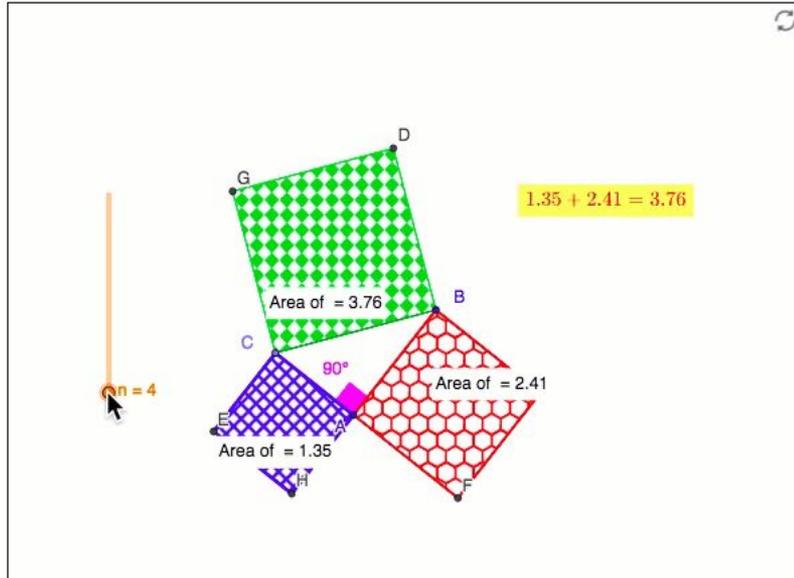


Suite

Maths Comes Alive With GeoGebra

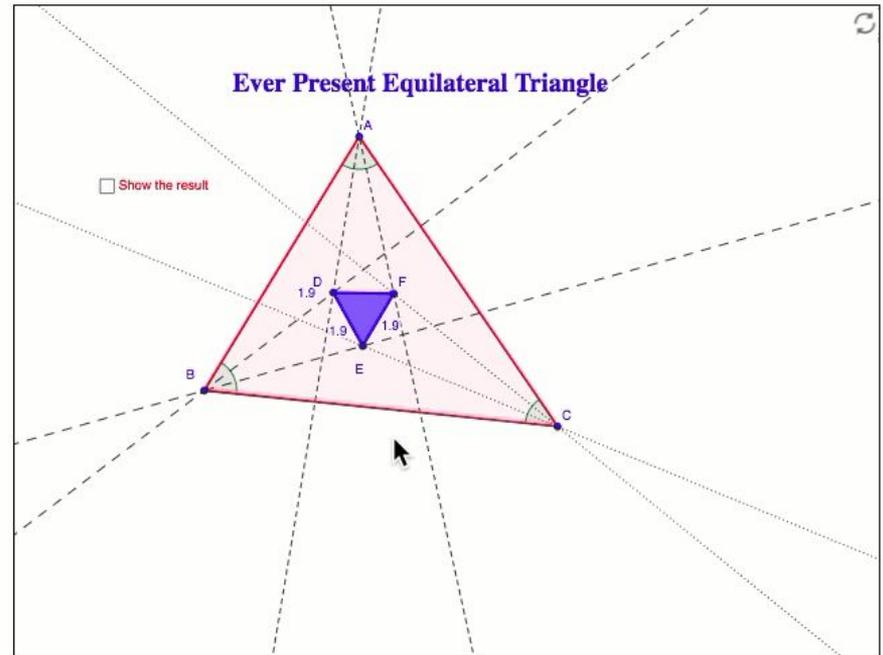
Pythagoras Theorem for Regular n-gons

Drag the slider. Observe the relation between the three areas. Do you agree that the Pythagoras Theorem is true for the regular n-gons ?!

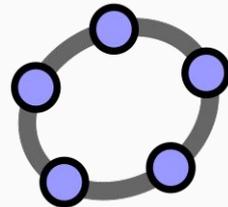
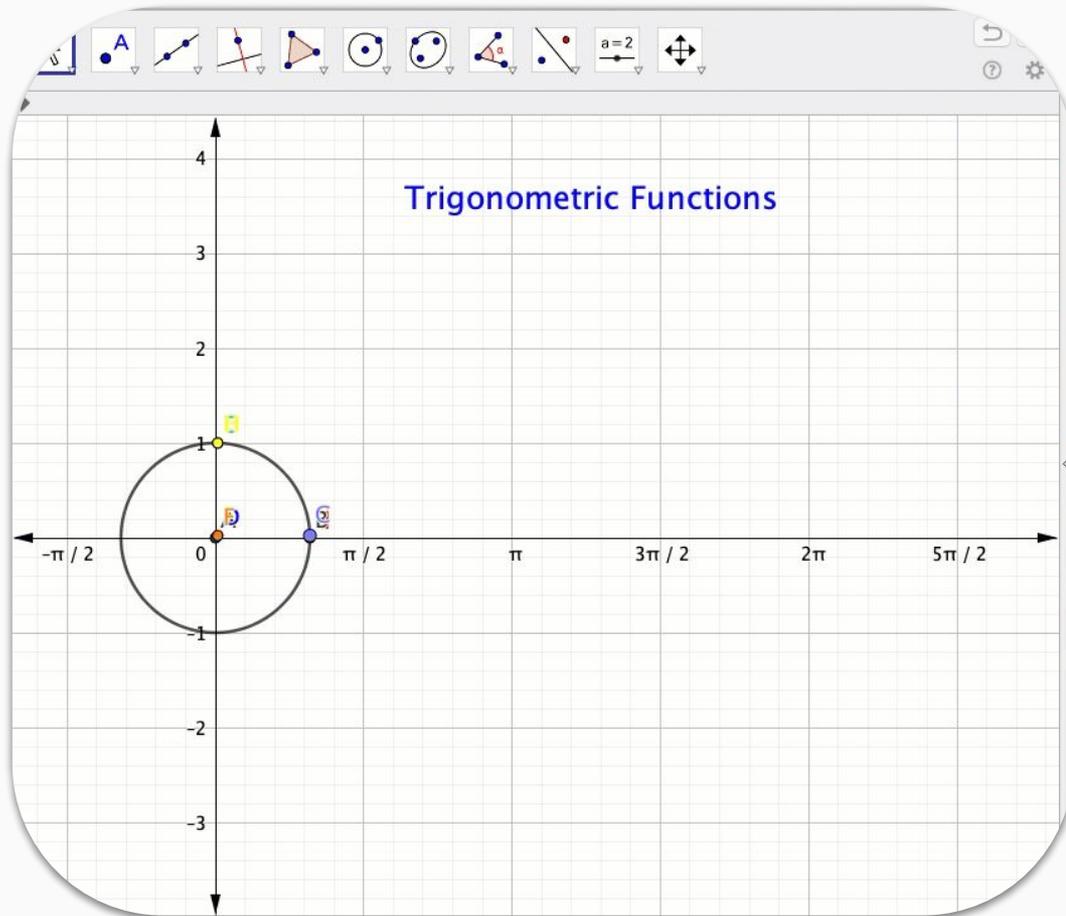


Ever Present Equilateral Triangle

Drag any of the three vertices of the triangle ABC, observe the relation between the three sides of the triangle DEF

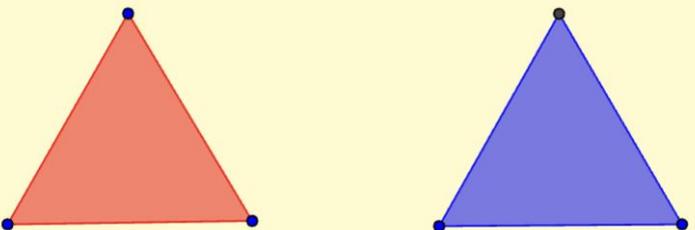


Create those "Aha" Moments

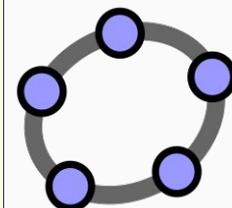


Construction vs Drawing

Construction vs Drawing



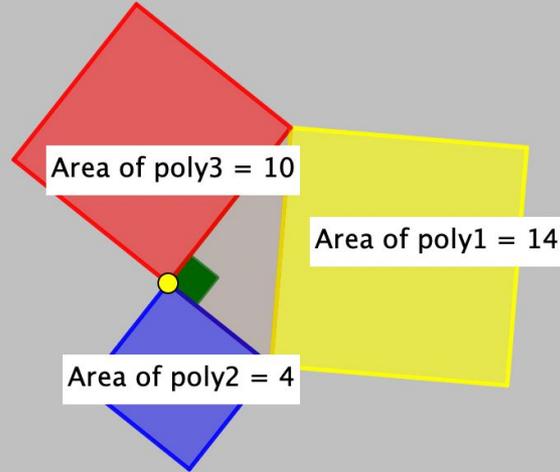
Construction



Drag Test!

Make Conjectures

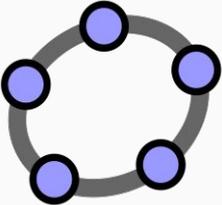
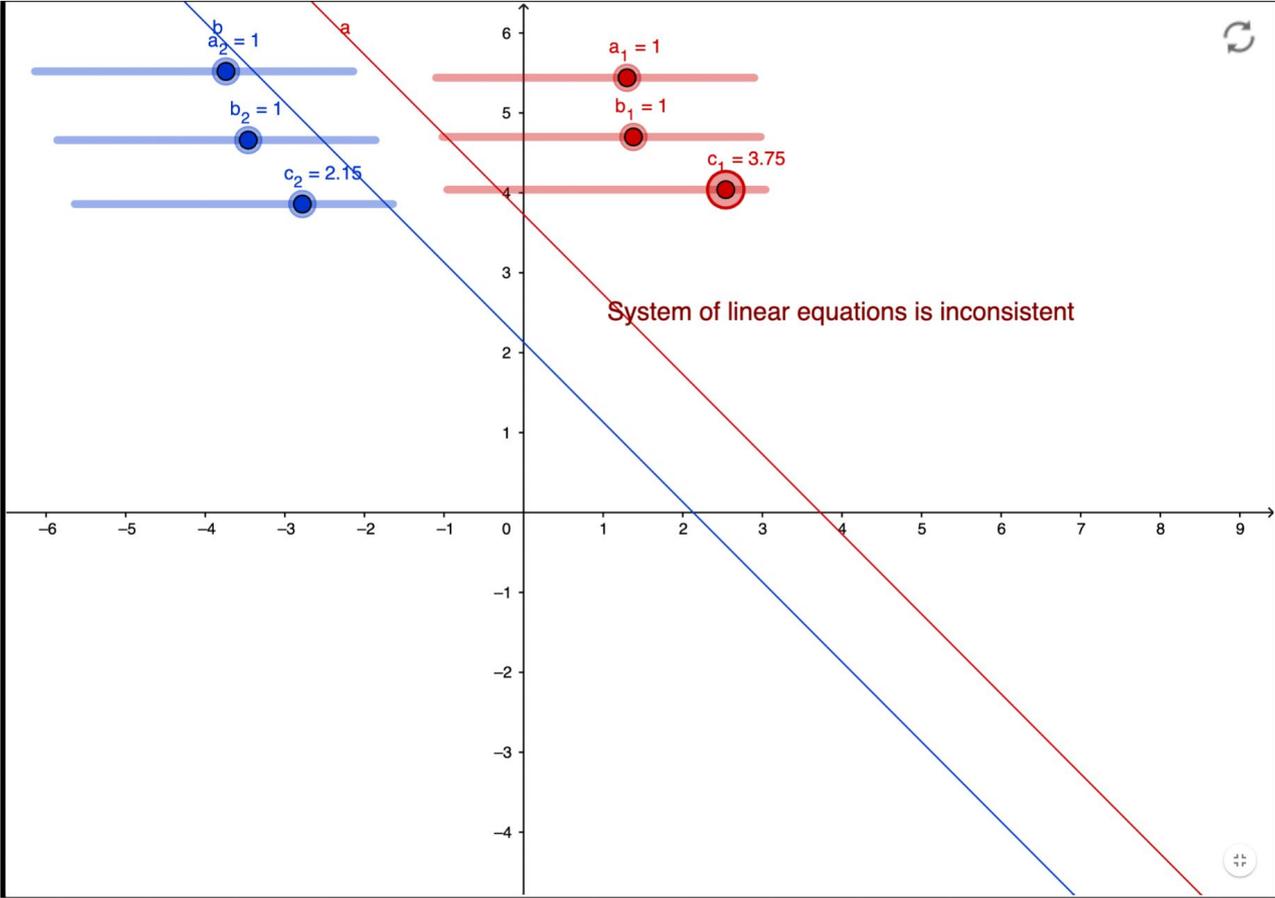
Drag the Big Yellow point. What do you observe?



Observation

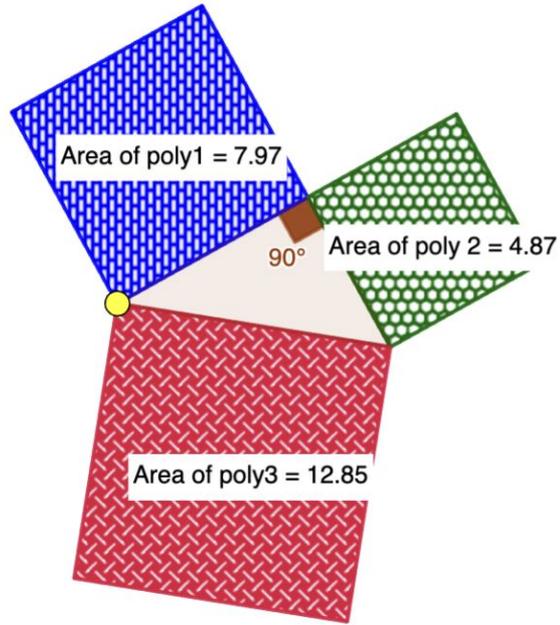


Sliders in GeoGebra



Extensions & Explorations

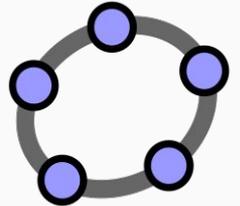
Pythagoras Theorem -Extension



Slide the slider to change the sides of polygons.

Use BIG Yellow point to change the size of the triangle.

$$7.97 + 4.87 = 12.85$$



Multiple Representation

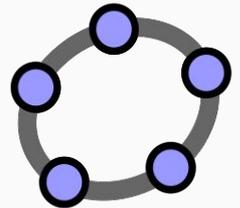
The screenshot displays a software interface with three main panels: Algebra, Graphics, and Spreadsheet. The Algebra panel is currently empty. The Graphics panel shows a Cartesian coordinate system with x and y axes ranging from -4 to 7. The Spreadsheet panel shows a grid with columns A, B, and C, and rows 1 through 20. The interface includes a toolbar at the top with various icons for drawing and editing, and an input field at the bottom left.

Algebra View

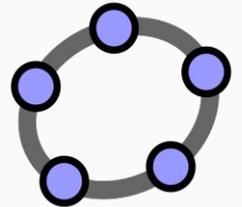
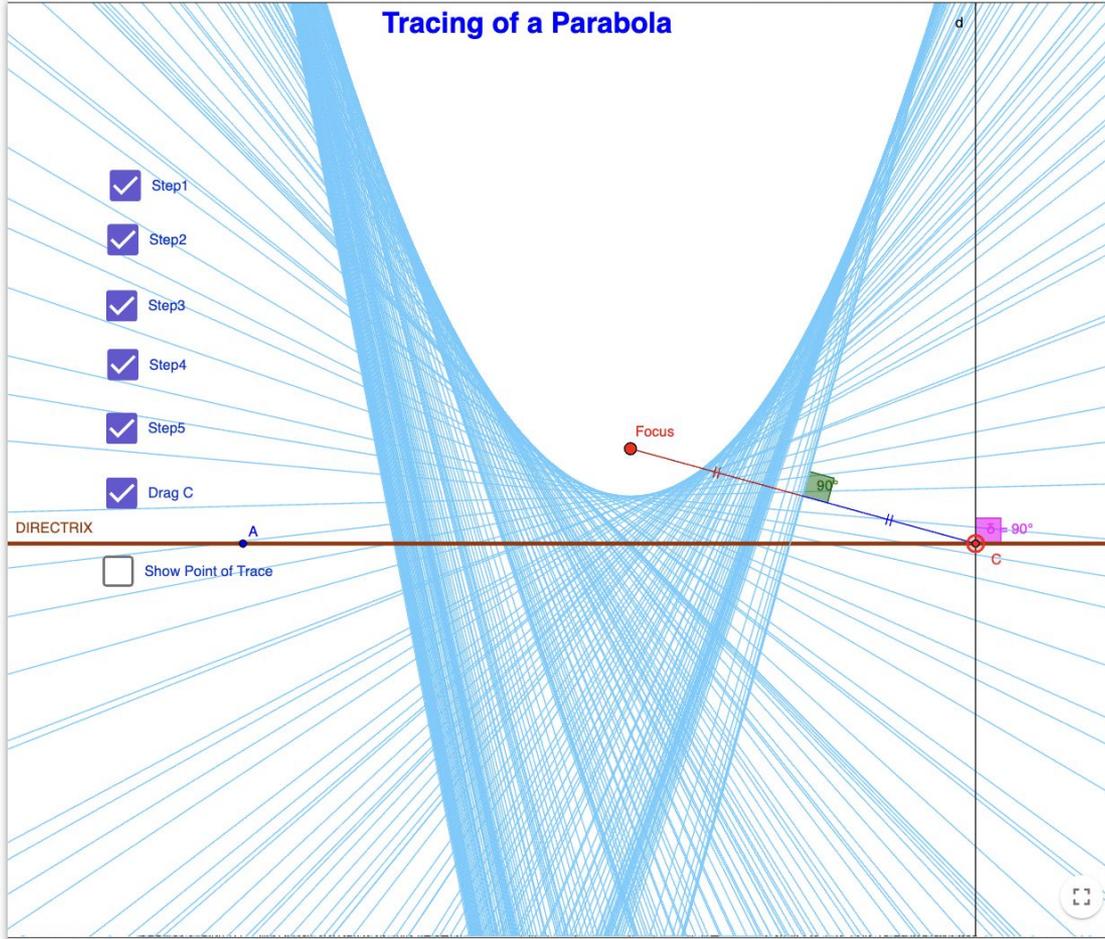
Graphics View

Spreadsheets

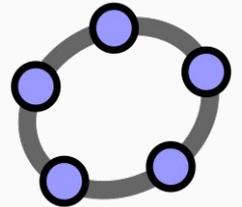
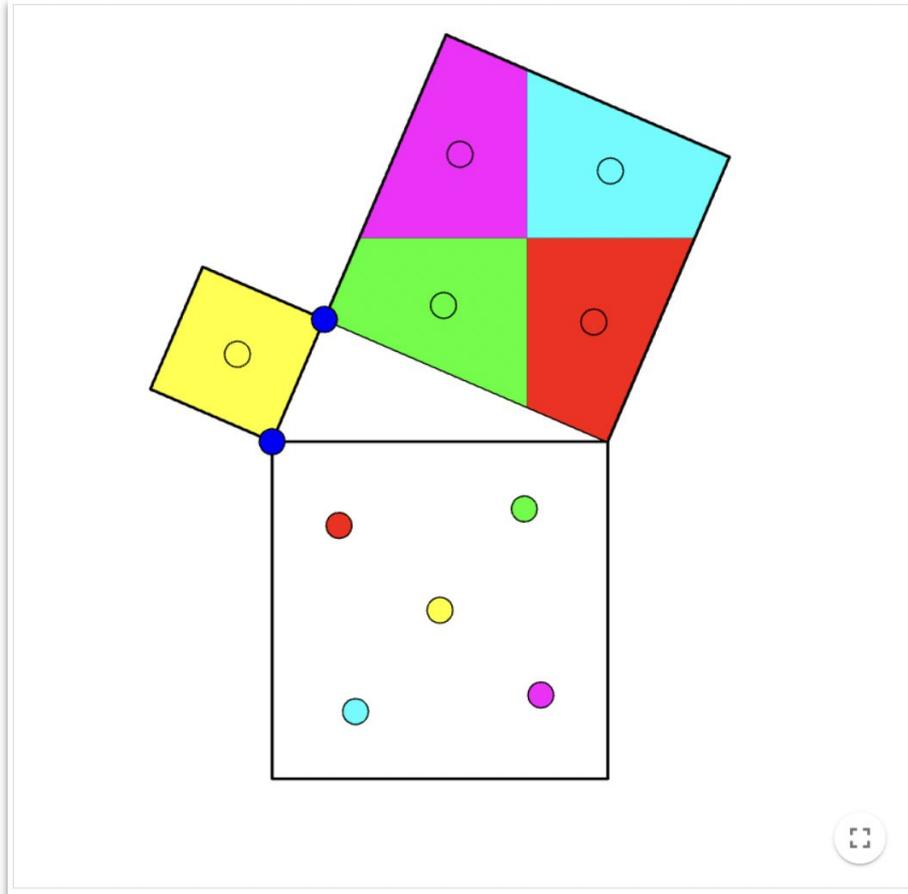
Input:



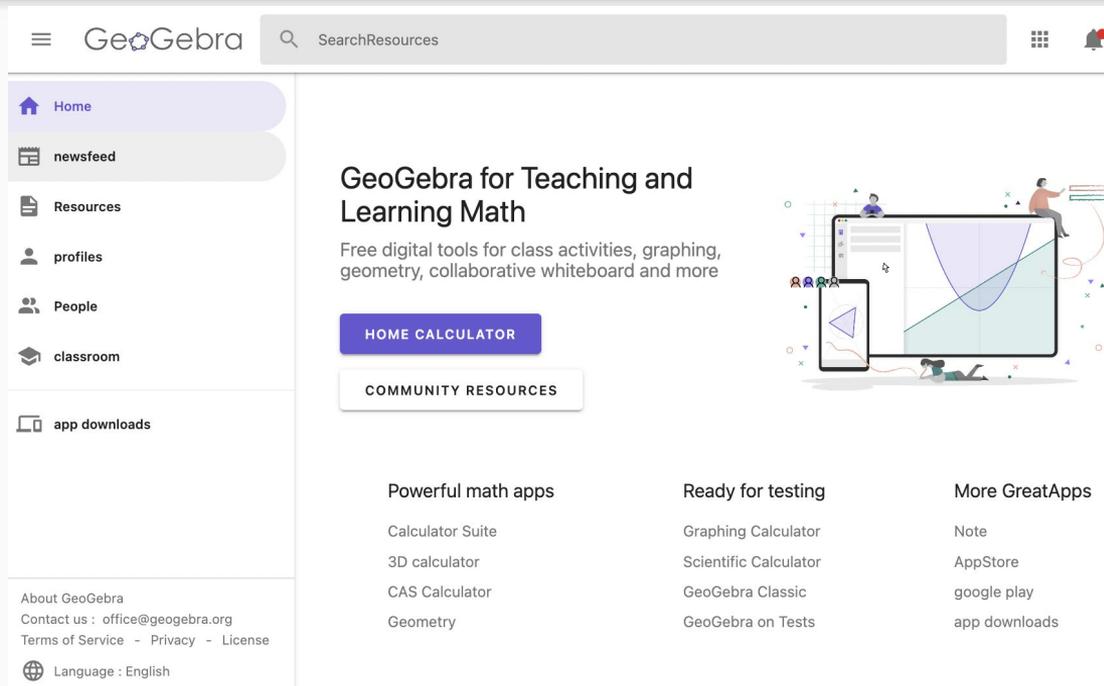
Demonstration Tool- Step by Step Construction



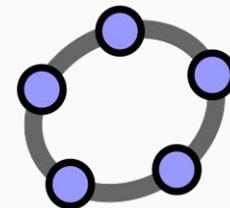
Visual Proofs & GeoGebra Worksheets



GeoGebra on Web: www.geogebra.org



The screenshot shows the GeoGebra website interface. At the top, there is a navigation bar with the GeoGebra logo, a search bar labeled "SearchResources", and icons for a grid and a notification bell. On the left side, there is a sidebar menu with the following items: Home (highlighted), newsfeed, Resources, profiles, People, classroom, and app downloads. The main content area features a large heading "GeoGebra for Teaching and Learning Math" with a subtext "Free digital tools for class activities, graphing, geometry, collaborative whiteboard and more". Below this text are two buttons: "HOME CALCULATOR" and "COMMUNITY RESOURCES". To the right of the text is an illustration of a large tablet displaying a graph of a parabola, with several small figures interacting with it. Below the main content area, there are three columns of text: "Powerful math apps" listing Calculator Suite, 3D calculator, CAS Calculator, and Geometry; "Ready for testing" listing Graphing Calculator, Scientific Calculator, GeoGebra Classic, and GeoGebra on Tests; and "More GreatApps" listing Note, AppStore, google play, and app downloads. At the bottom left of the sidebar, there is a footer section with "About GeoGebra", contact information "office@geogebra.org", and links for "Terms of Service", "Privacy", and "License". A language selector shows "Language : English".

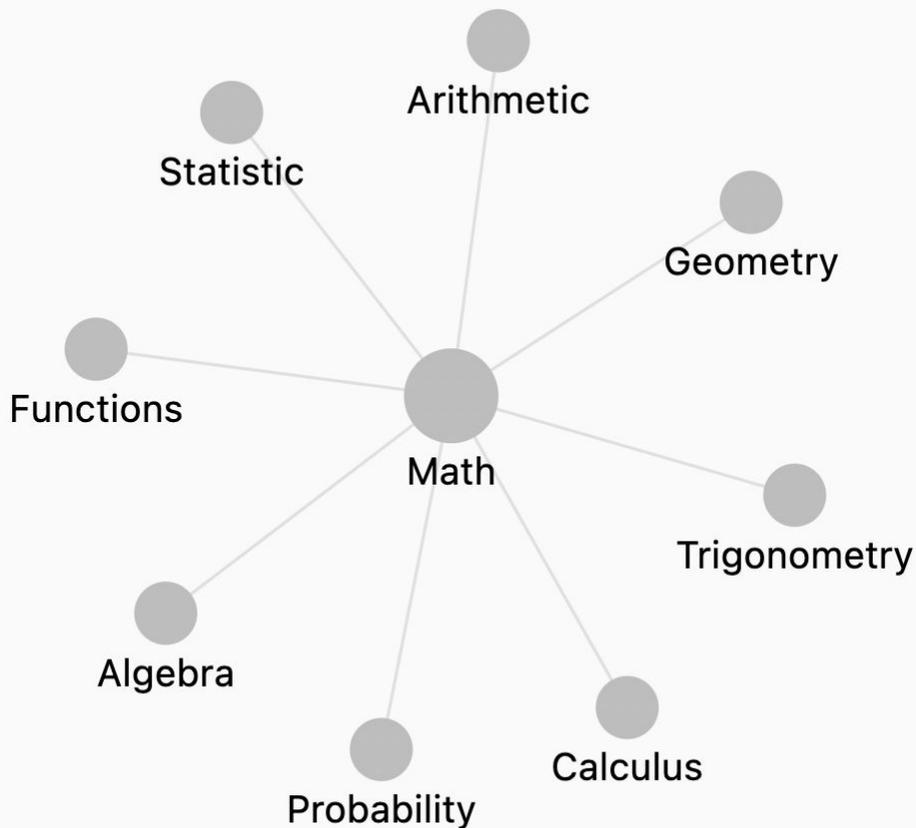


**Make an account
in GeoGebra**

www.geogebra.org

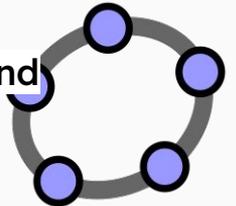
**Over 1 million
community
created, free
activities,
simulations,
exercises,
lessons,
games
math
science!**

**and
for
&
science!**



GeoGebra Classroom: Live conversations with interactive math tools

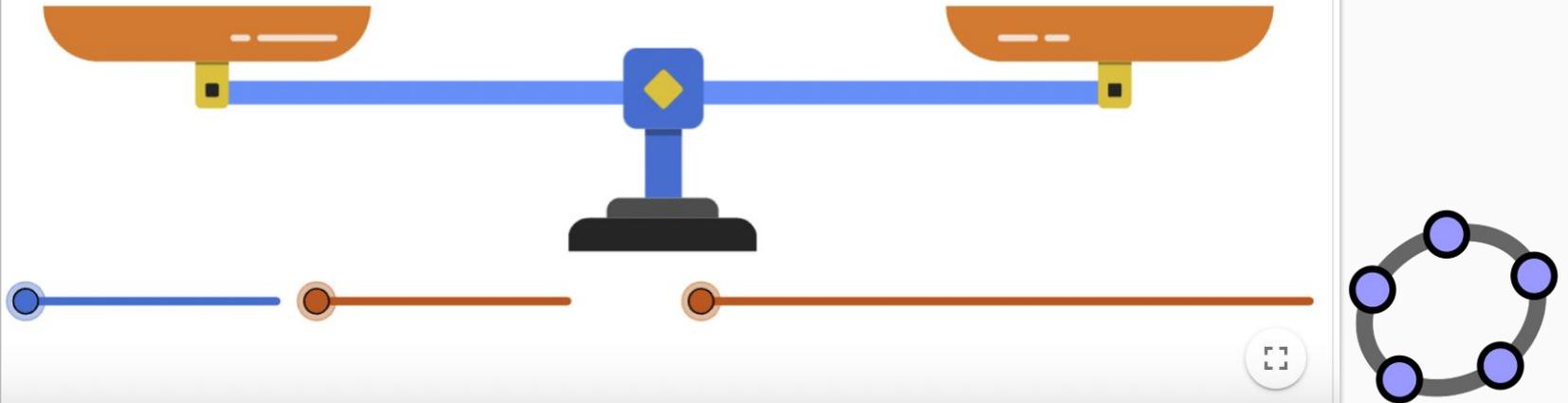
- *GeoGebra Classroom* is a virtual platform through which teachers can Assign interactive and engaging tasks for students
- View live updated progress of students working on a specific task
- view which tasks students have (or have not) started
- ask the entire class questions and see all student answers instantly
- Hide student names when displaying student responses to questions
- team-teach together by adding co-teachers
- facilitate rich, interactive discussions among all students, groups of students, and individual students.



Experience GeoGebra Classroom

Build the equation.

$$4x + 6 = 54$$



Learn GeoGebra

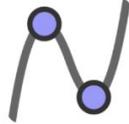
tutorials

Learn how easy it is to use GeoGebra apps with our tutorial videos and courses!



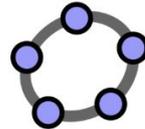
BOOK
**Learn GeoGebra
Classroom**

GeoGebra team



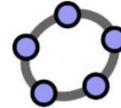
BOOK
**Learn Graphing
Calculator**

GeoGebra Team German



BOOK
Learn Calculator Suite

GeoGebra team



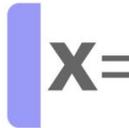
BOOK
Learn GeoGebra Classic

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BOOK
**Learn how to use
Resources**

GeoGebra team



BOOK
Learn CAS Calculator

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BOOK
LearnNotes

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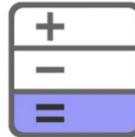
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Learn Geometry

GeoGebra Team German



BOOK
Learn 3D Calculator

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BOOK
**Learn Scientific
Calculator**

GeoGebra Team German



BOOK
GeoGebra on Tests

GeoGebra Team German



GeoGebra



With Augmented Reality

How to quickly set up
on iOS & Android

BOOK
**GeoGebra 3D with AR:
Quick Setup Instructions**

Tim Brzezinski

