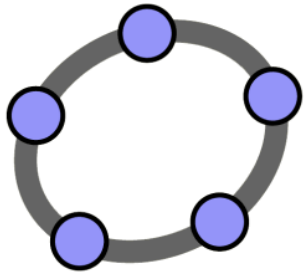
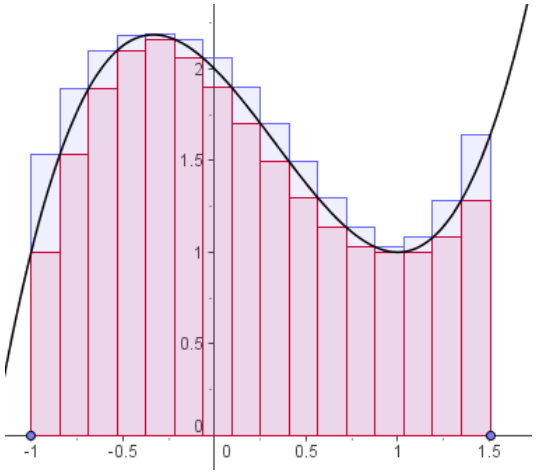
GeoGebra Conference 2009

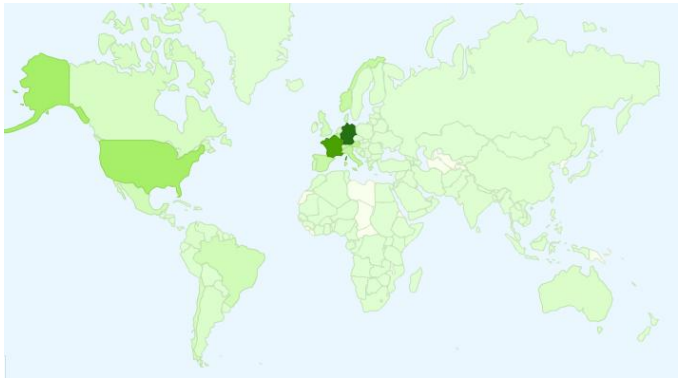


Markus Hohenwarter
Florida State University
markus@geogebra.org

Overview

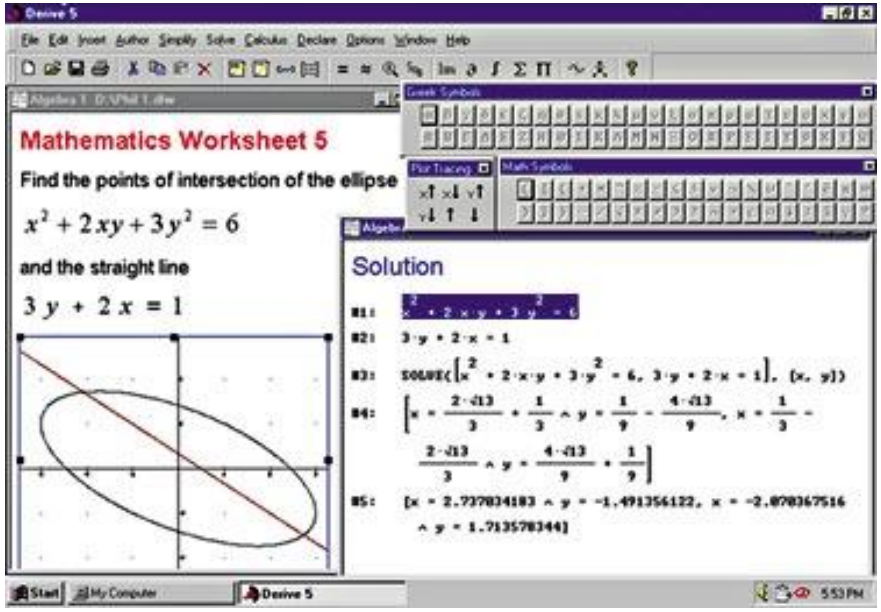
- Short History of GeoGebra
- Future Plans
- GeoGebra Community
- International GeoGebra Institute





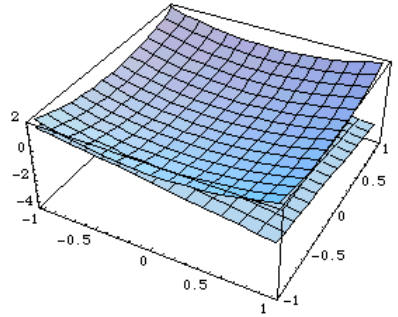
GeoGebra
Short History

Computer Algebra Systems



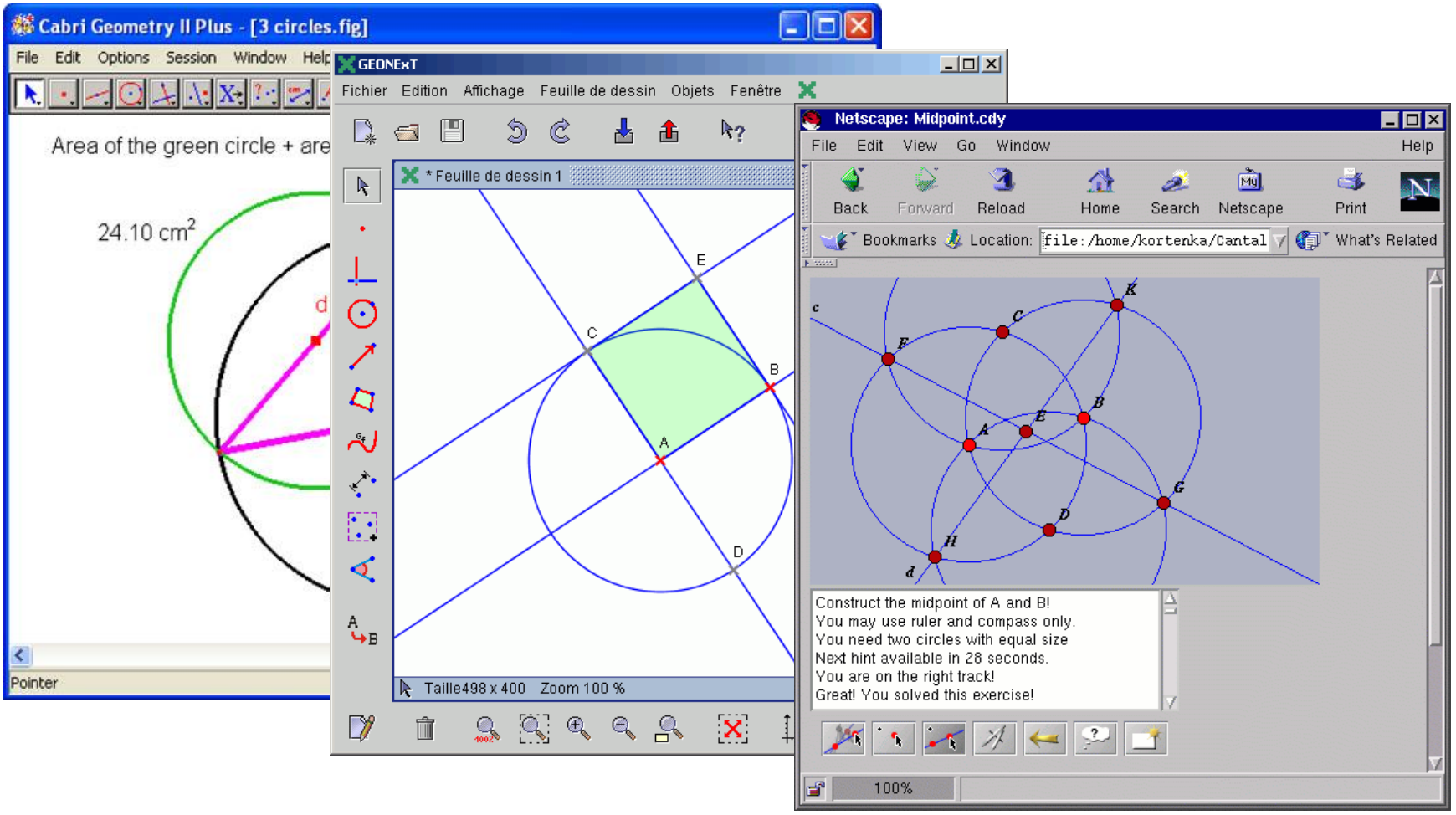
Derive

```
Clear[f, fx, fy, a, b, c]

f[x_, y_] := x^2 + y^2

x0 = -0.5;
y0 = -0.5;

fx[x_, y_] = D[f[x, y], x];
fy[x_, y_] = D[f[x, y], y];

a = fx[x0, y0];
b = fy[x0, y0];
c = f[x0, y0] - a x0 - b y0;

T[x_, y_] := a x + b y + c

Show[Plot3D[f[x, y], {x, -1, 1}, {y, -1, 1},
             PlotRange -> {-4, 2}],
           Plot3D[T[x, y], {x, -1, 1}, {y, -1, 1},
            PlotRange -> {-4, 2}]]
```

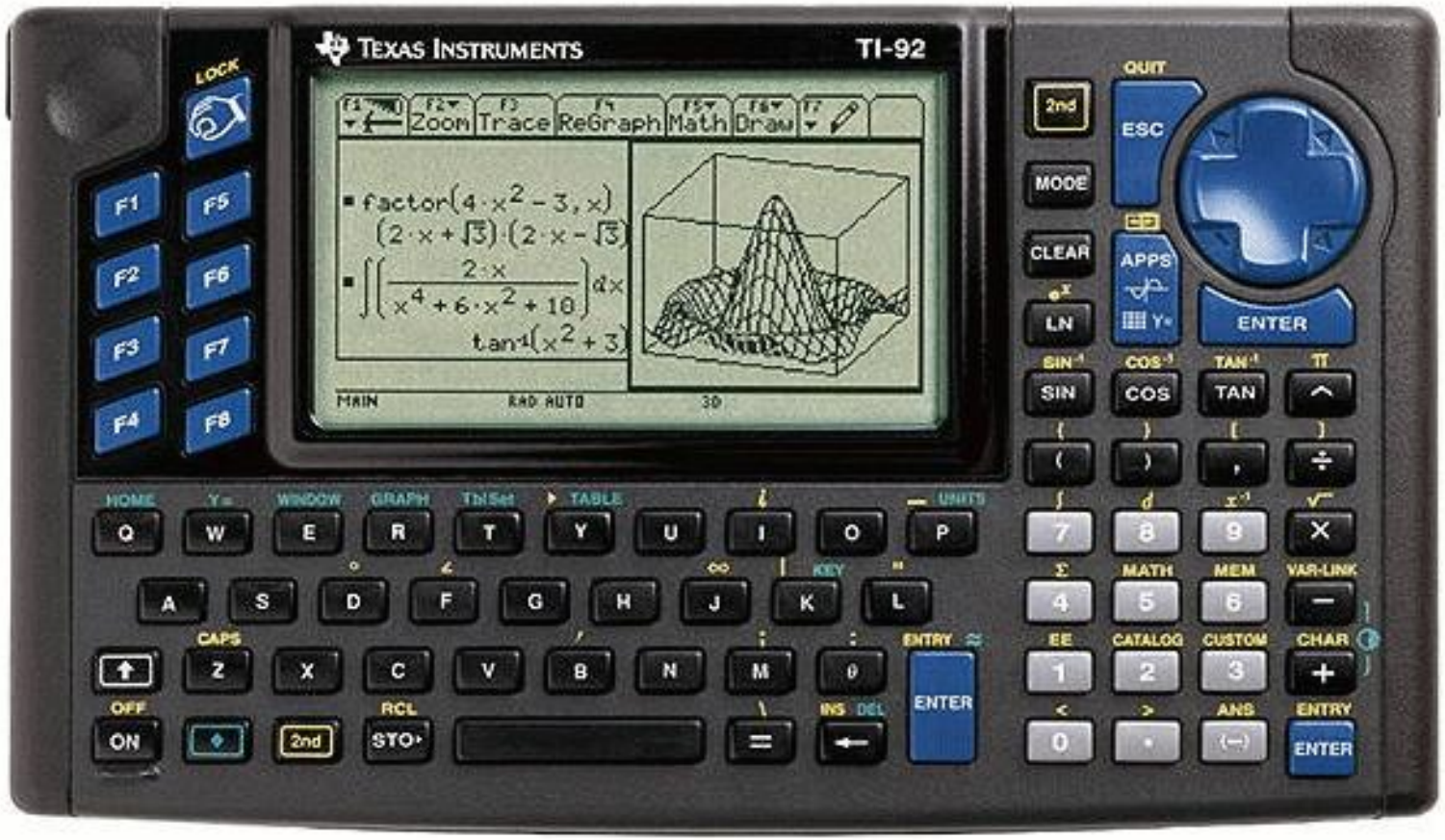


Mathematica

Dynamic Geometry Software

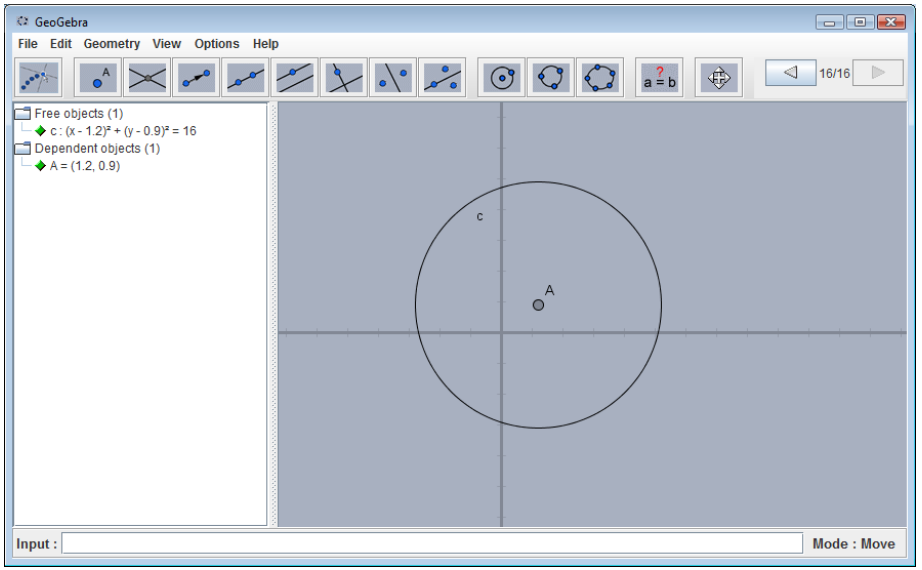


TI-92: DGS and CAS



GeoGebra = Geometry & Algebra

- 2001/02
  Master's Project
  Univ. Salzburg
- Version 1.0
  April 2002

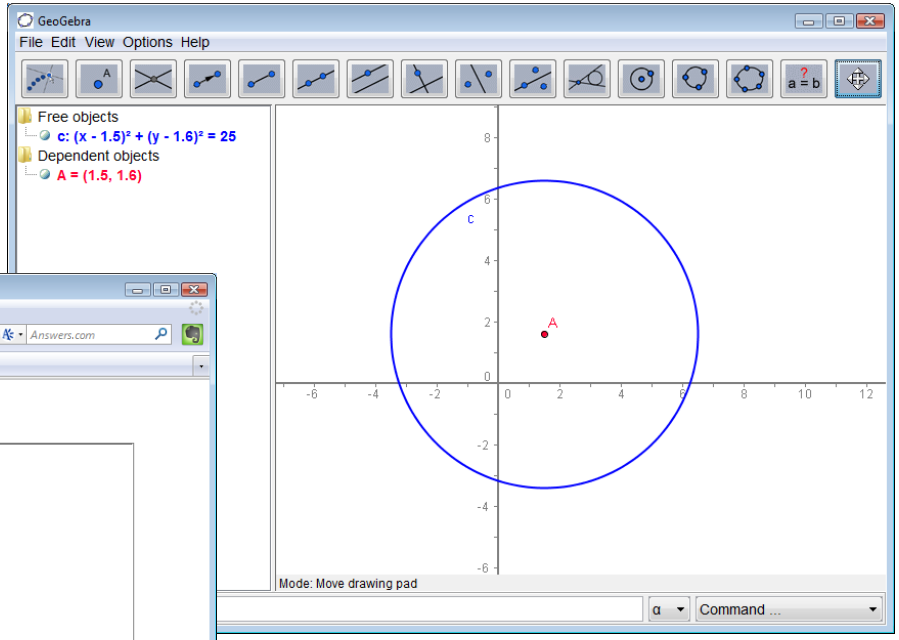


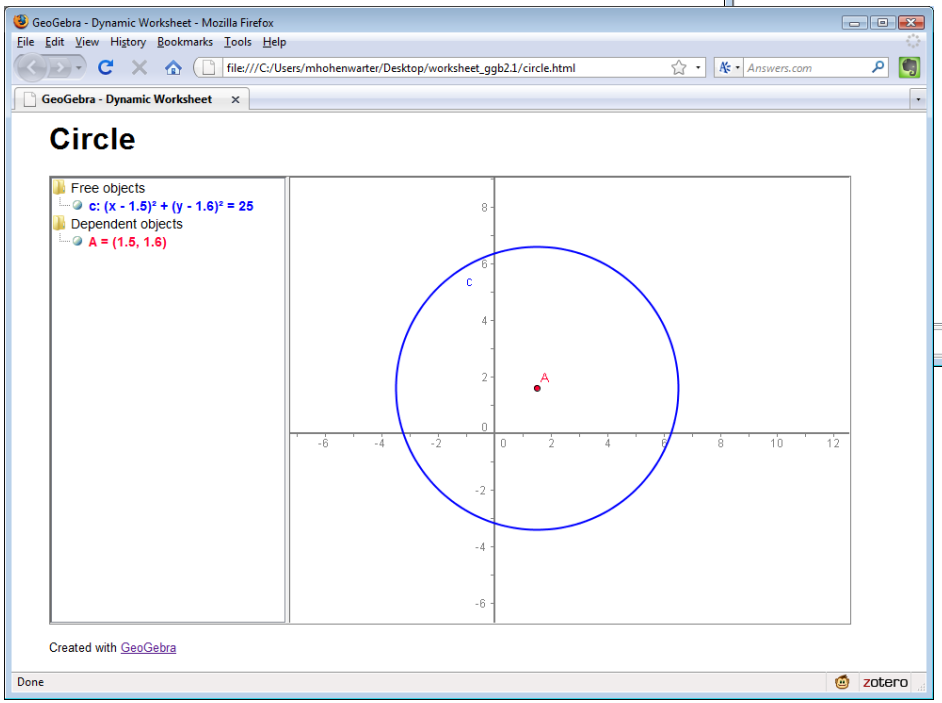
- Tool for Analytic Geometry:
  points, vectors, lines, conic sections
- Nov 2002:
  European Academic Software Award

EUROPEAN ACADEMIC SOFTWARE AWARD 2002

Dynamic Worksheets

- Version 2.1
  January 2004





- Interactive
  web pages

2005: GeoGebra User Forum

GeoGebra User Forum

GeoGebra
www.geogebra.org

FAQ Search Memberlist Usergroups
Profile You have no new messages Log out [Markus Hohenwarter]

You last visited on 07. Oct 2007 11:25
The time now is 11. Oct 2007 21:54
GeoGebra Forum Index

View posts since last visit
View your posts
View unanswered posts

Forum	Topics	Posts	Last Post
English speaking users			
Using GeoGebra Questions concerning the use of GeoGebra as a stand-alone application	183	803	09. Oct 2007 4:45 mathmagic
Technological Questions Installation, dynamic worksheets, GeoGebraWiki, JavaScript, etc.	144	599	09. Oct 2007 19:41 AntonioRibeiro
Student Forum A place for students to discuss GeoGebra questions	4	7	08. Oct 2007 11:42 Klement
German speaking users			
Bedienung von GeoGebra Fragen rund um die Bedienung von GeoGebra als Einzelanwendung	203	674	10. Oct 2007 3:51 kalle2410
Technische Fragen Installation, dynamische Arbeitsblätter, GeoGebraWiki, JavaScript usw.	127	513	11. Oct 2007 14:47 Yves Kreis
Schülerforum			18. Jan 2007 10:16

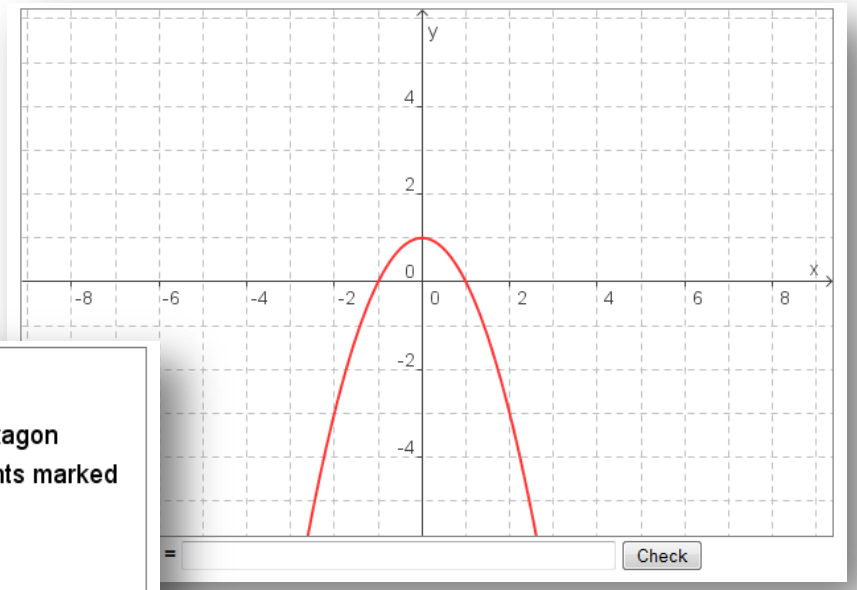
www.geogebra.org/forum

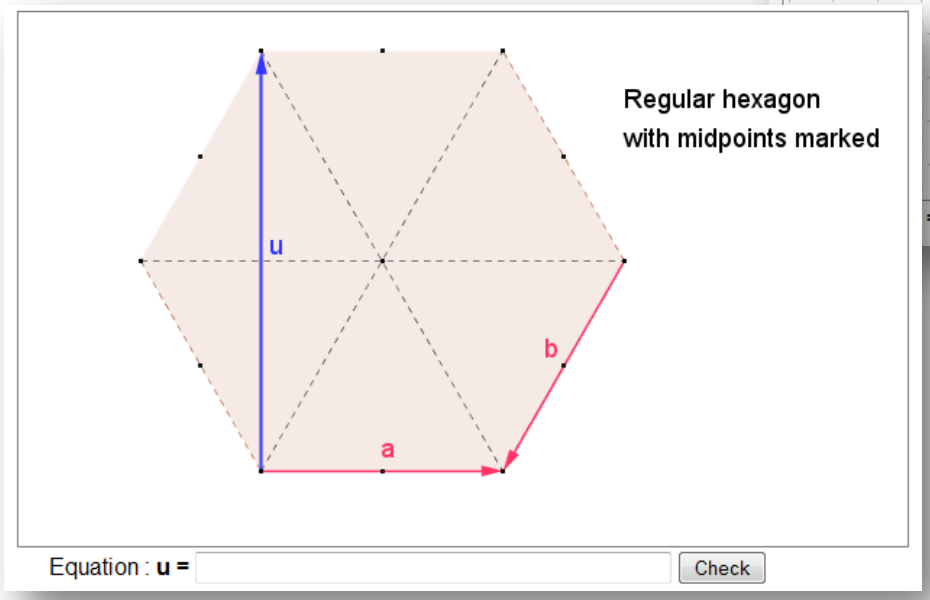
GeoGebraWiki – Free Materials

www.geogebra.org/wiki

Interactive Dynamic Worksheets

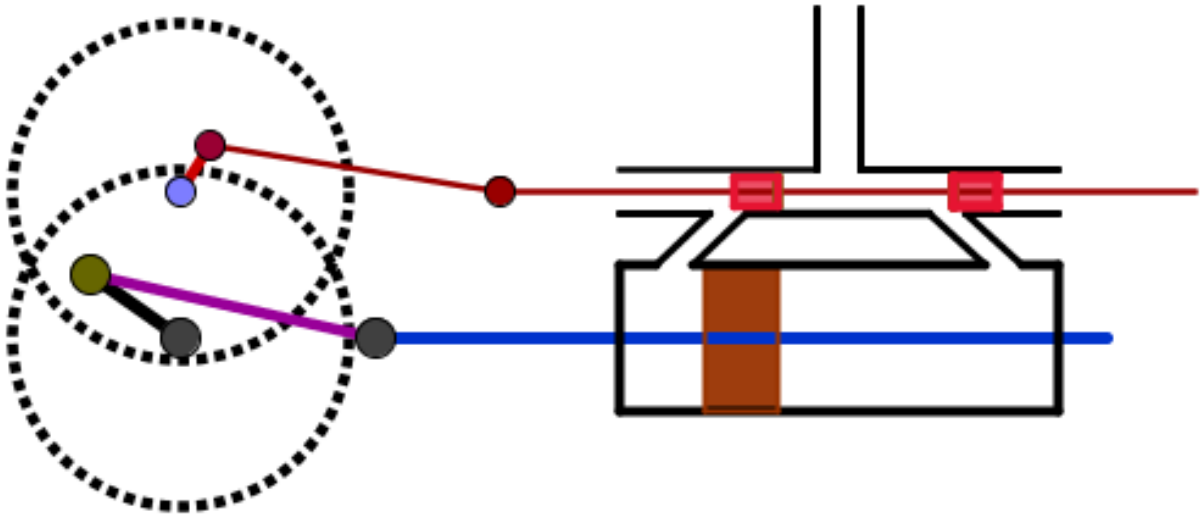
Quadratic test





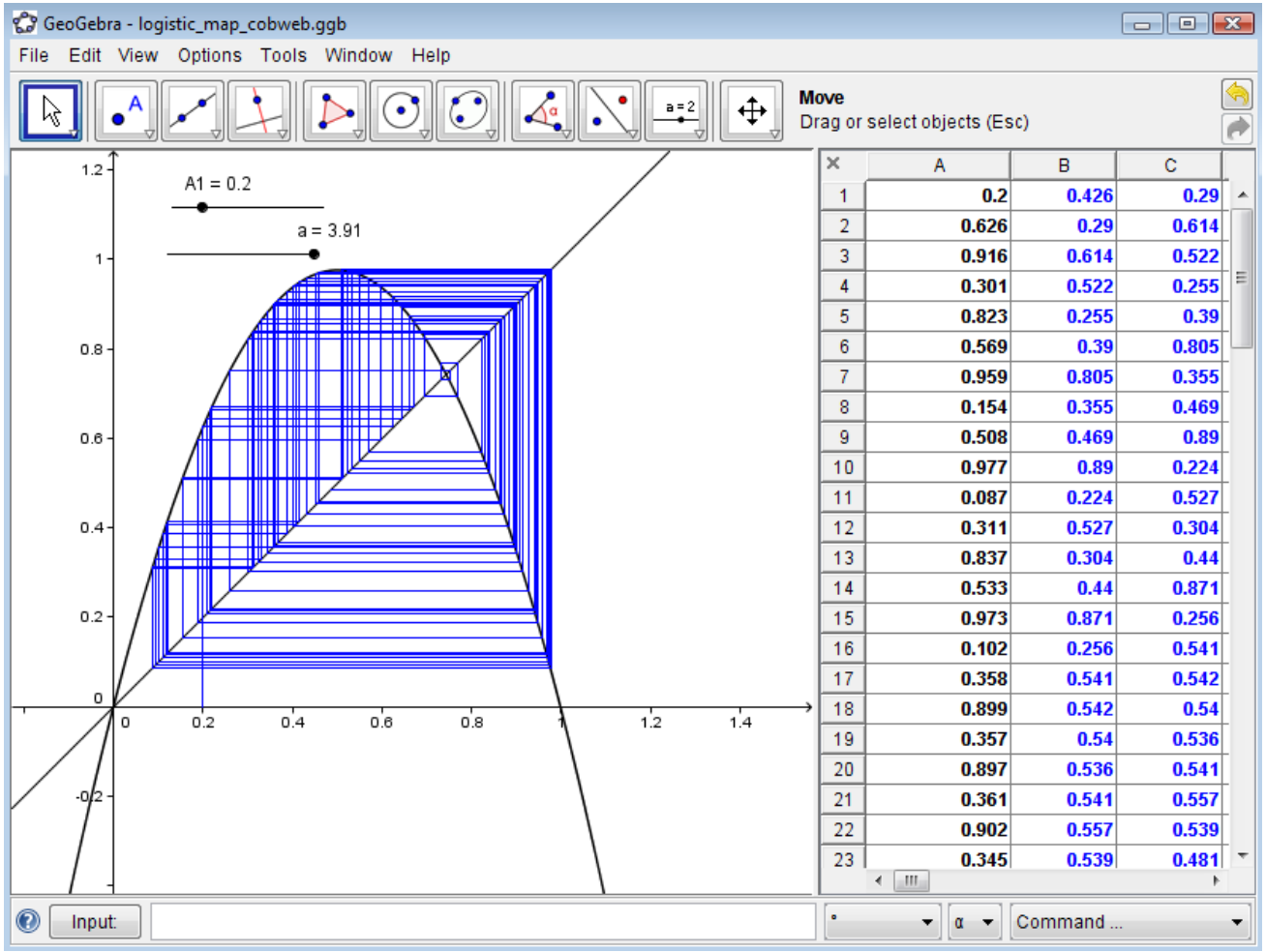
Vectors

Animations in GeoGebra 3.2



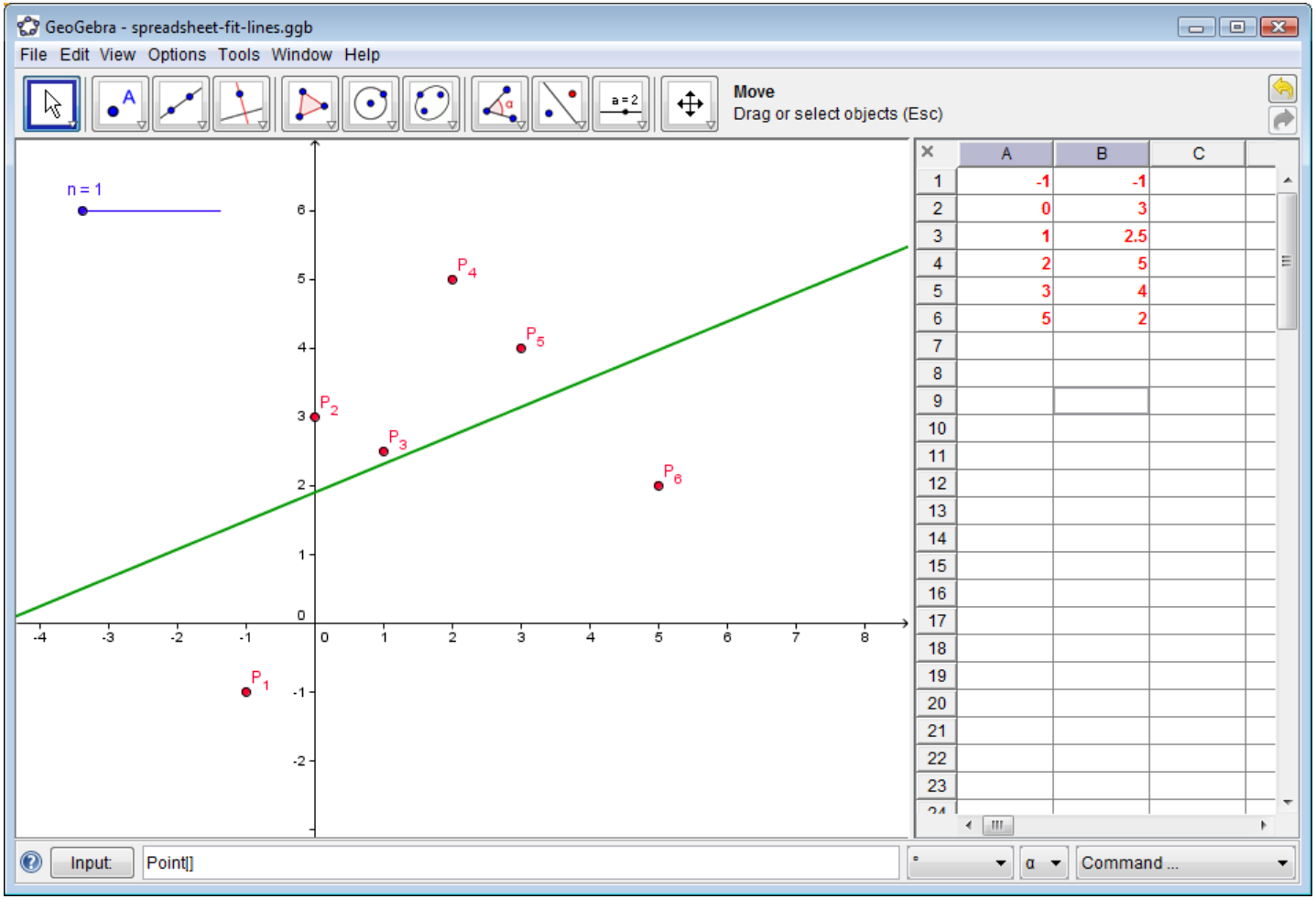
B. Gabel, Deutschland

Spreadsheet in GeoGebra 3.2

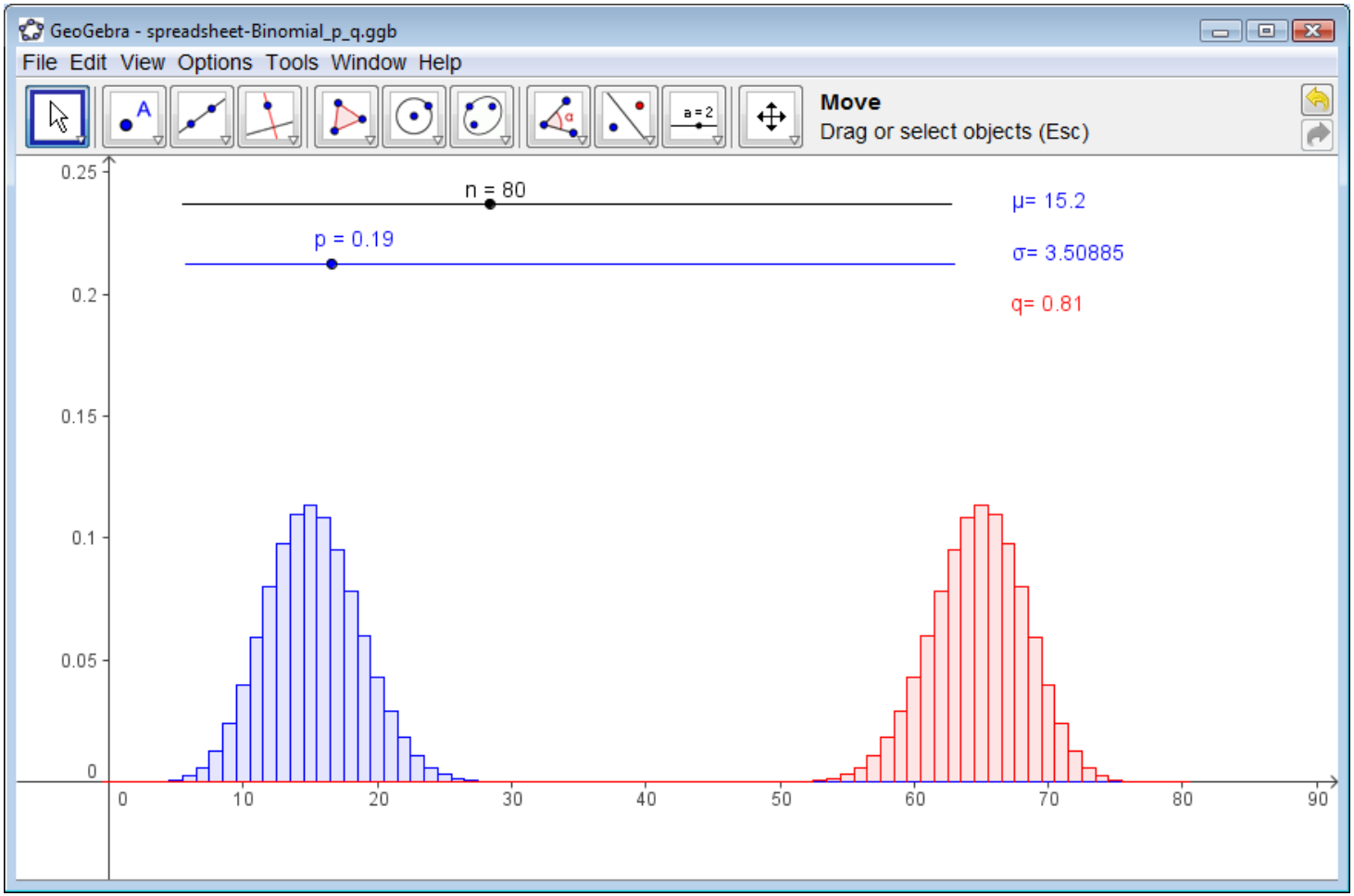


	A	B	C
1	0.2	0.426	0.29
2	0.626	0.29	0.614
3	0.916	0.614	0.522
4	0.301	0.522	0.255
5	0.823	0.255	0.39
6	0.569	0.39	0.805
7	0.959	0.805	0.355
8	0.154	0.355	0.469
9	0.508	0.469	0.89
10	0.977	0.89	0.224
11	0.087	0.224	0.527
12	0.311	0.527	0.304
13	0.837	0.304	0.44
14	0.533	0.44	0.871
15	0.973	0.871	0.256
16	0.102	0.256	0.541
17	0.358	0.541	0.542
18	0.899	0.542	0.54
19	0.357	0.54	0.536
20	0.897	0.536	0.541
21	0.361	0.541	0.557
22	0.902	0.557	0.539
23	0.345	0.539	0.481

Regression Lines & Polynomials



Binomial Distribution

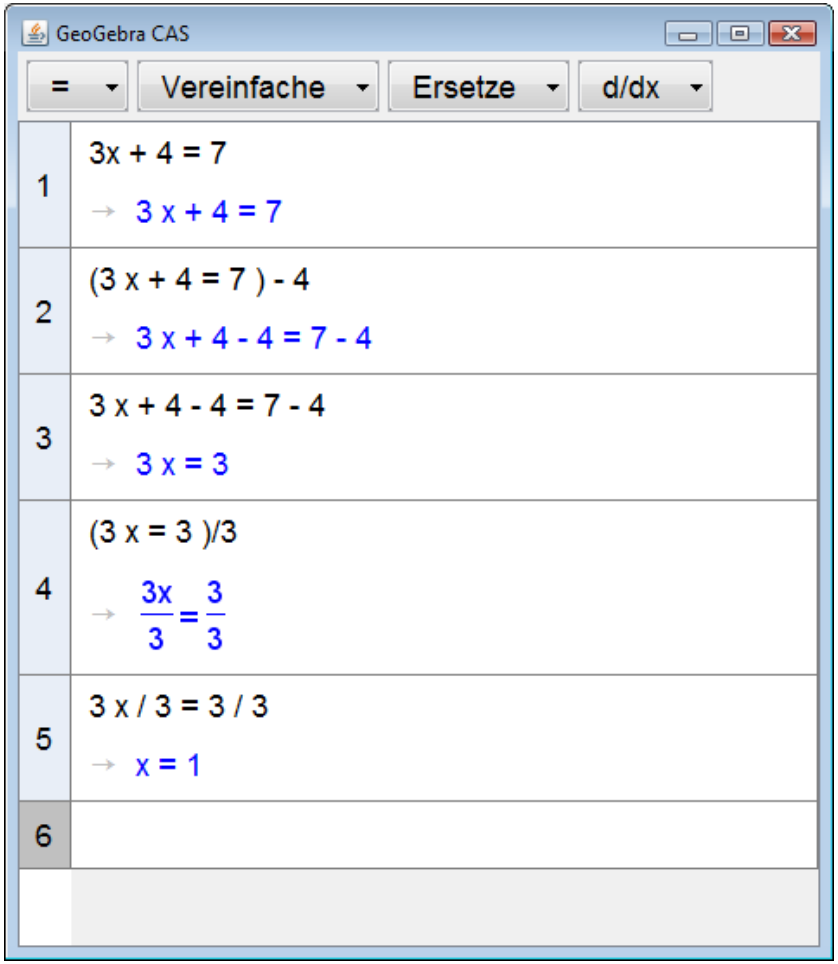


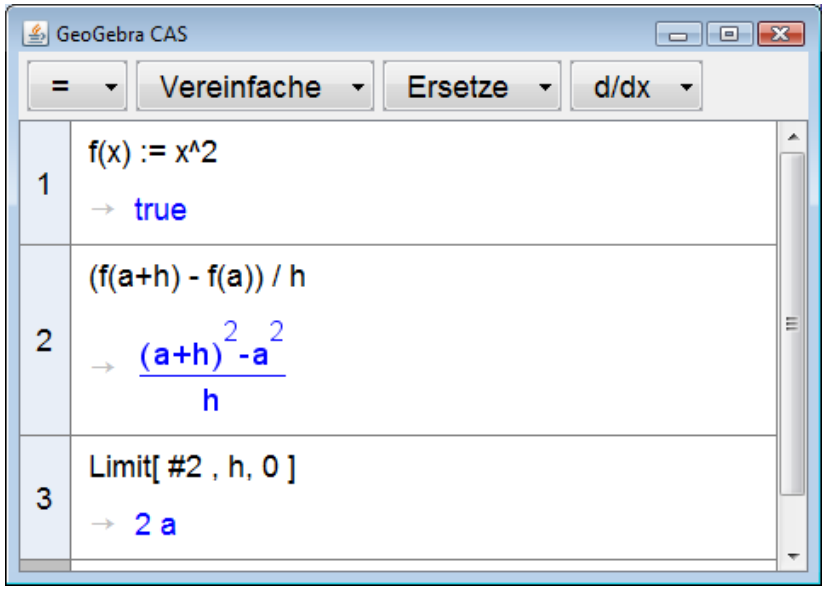
GeoGebra
Future

Future Plans

- Make it Easier, Easier, Easier!
- Drag & Drop User Interface
- Symbolic Algebra View (CAS)
- 3D Graphics
- …

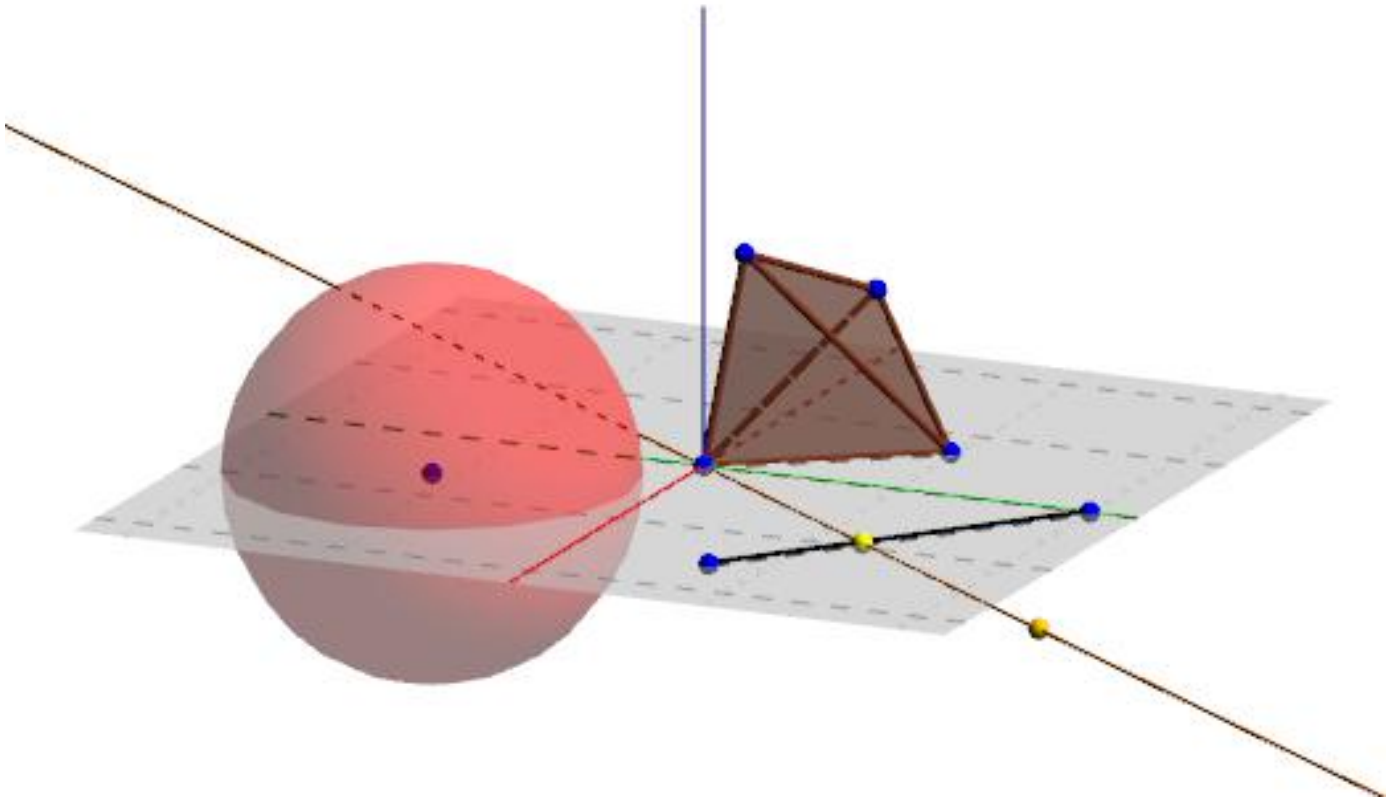
GeoGebraCAS





In cooperation with the
Austrian GeoGebra Institute (AGI)
with support of the
Austrian Ministry of Education

GeoGebra3D



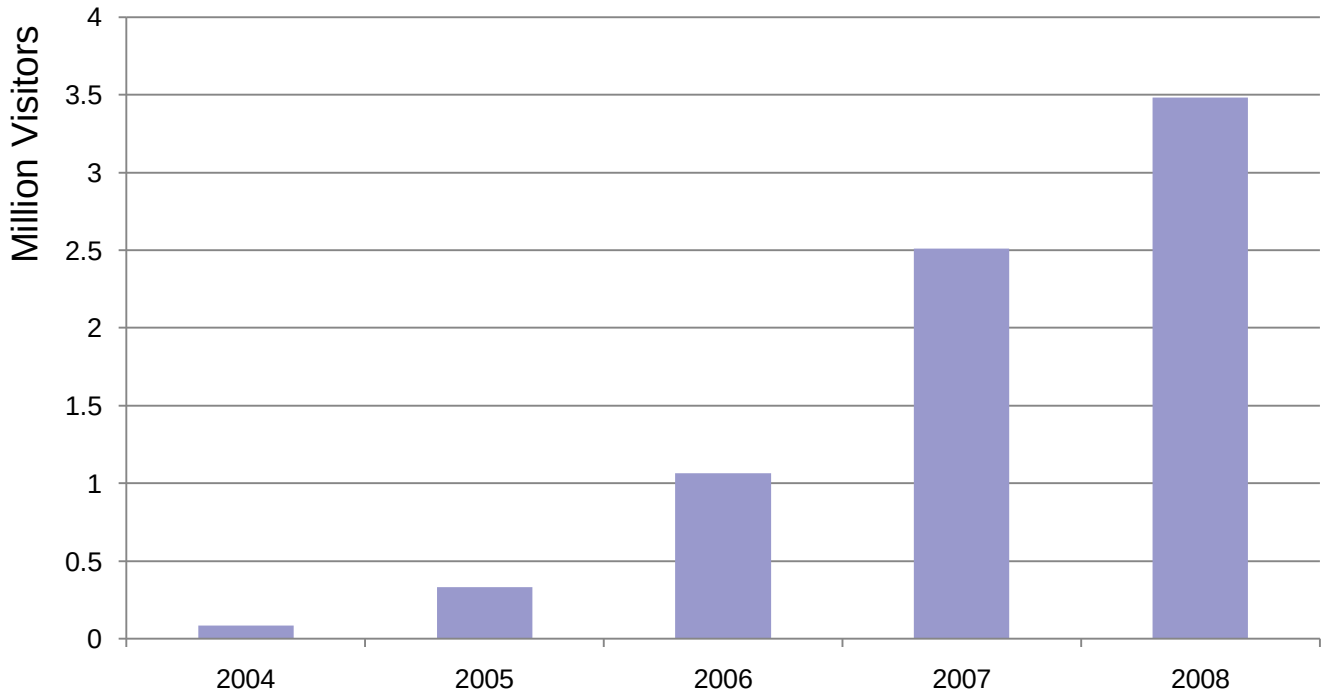
Mathieu Blossier u.a., University of Rouen, France

GeoGebra
Community

Open Source > Freely Available

- Available free of charge for everyone
  in Schools and at Home
- Online Collaboration
  - International Community
  - User Forum – Users help Users
  - GeoGebraWiki – Pool of Shared Materials
- Expandable
  by using other Open Source Libraries

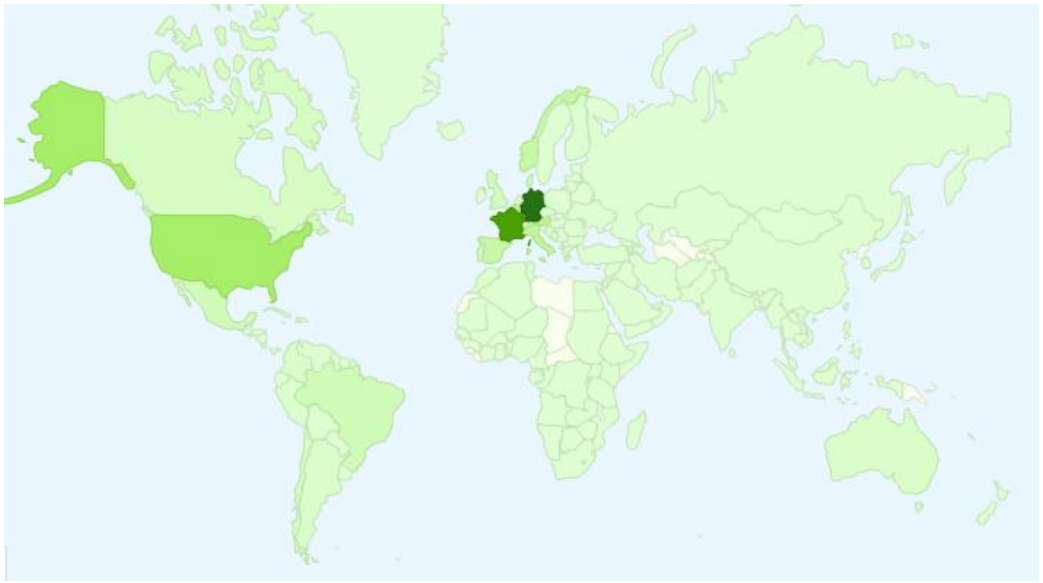
Visitors on www.geogebra.org



- Up to 15.000 Visitors / Day
- Up to ½ Million Visitors / Month

Behind the Scenes

- 5 Core Developers
- 15 Contributors
- 45 languages
- 100 Translators
- 190 countries
- 8500 Learning Objects



International
GeoGebra Institute
since 2008

International GeoGebra Institute

- Goals of IGI (www.geogebra.org/igi)
  - Teacher training and support
  - Material and software development
  - Research projects and collaboration
- Local GeoGebra Institutes in

  Austria, Brazil, Denmark, Hungary, Norway, Poland, Portugal, Spain, Turkey, UK, USA
- MSOR Connections special issue, Book “Model Centered Learning”, GeoGebra Conference

Thank you!

- GeoGebra
  www.geogebra.org
- International GeoGebra Institute
  www.geogebra.org/igi
- Slides of this talk
  www.geogebra.org/talks
- Markus Hohenwarter
  markus@geogebra.org