

GeoGebra-Days

Weiterentwicklung und Trends

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GeoGebra - Die Gegenwart



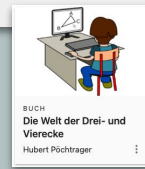
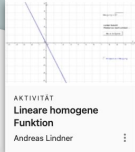
We are GeoGebra



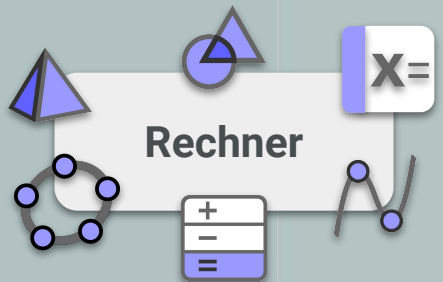
Prüfungen



Unterrichtsmaterialien



Rechner



X=

Notizen - Whiteboard



GeoGebra Classroom





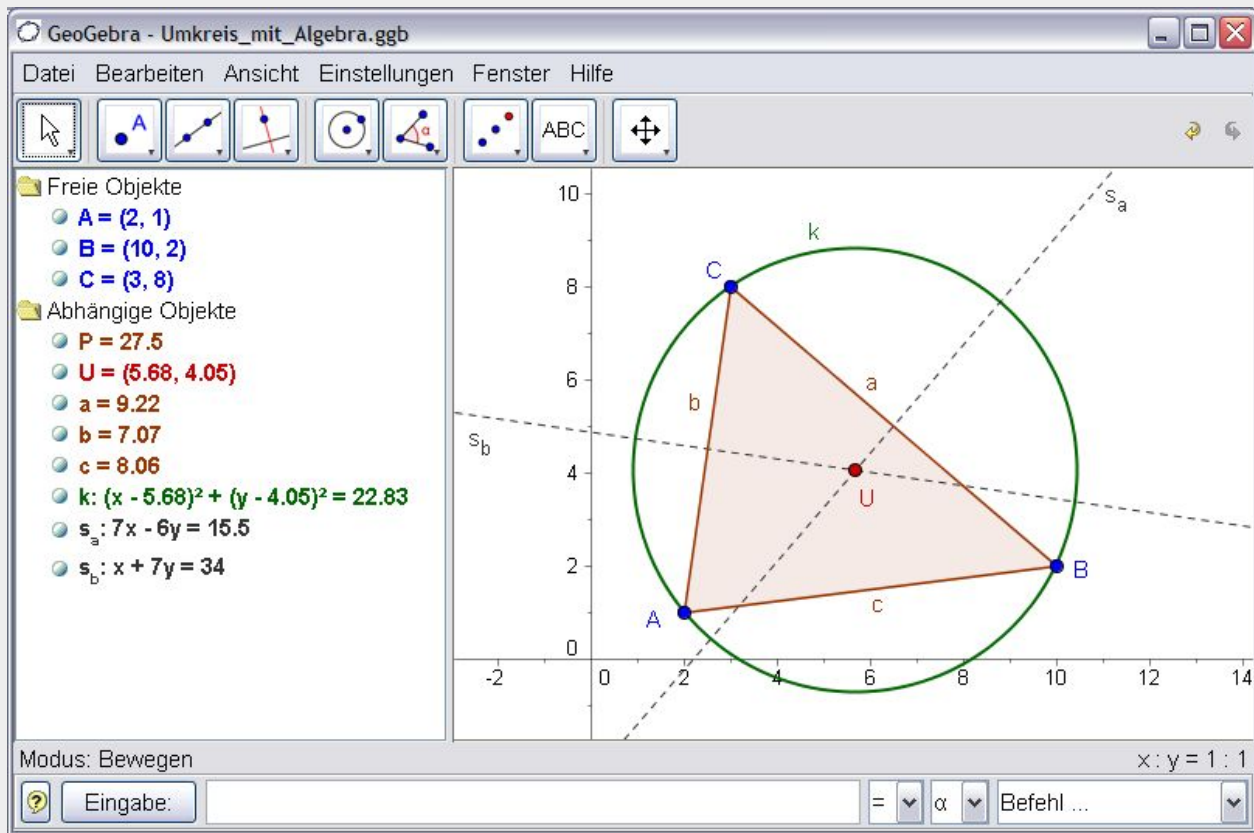
GeoGebra Mathe Apps

Der passende Rechner für den Unterricht

GeoGebra = Geometrie + Algebra

GeoGebra Desktop

Screenshot 2006



GeoGebra Web



GeoGebra App

geogebraweb.appspot.com/?code=4%2FFdQ8MiOTVfiufXbEcnjL7aL4RssX.sjXDP4OzYZQeO

Datel Bearbeiten Einstellungen Hilfe kovzol@gmail.com

$O_A = (5.7, -0.22)$
 $O_B = (-0.49, 4.14)$
 $O_C = (8.07, 4.21)$

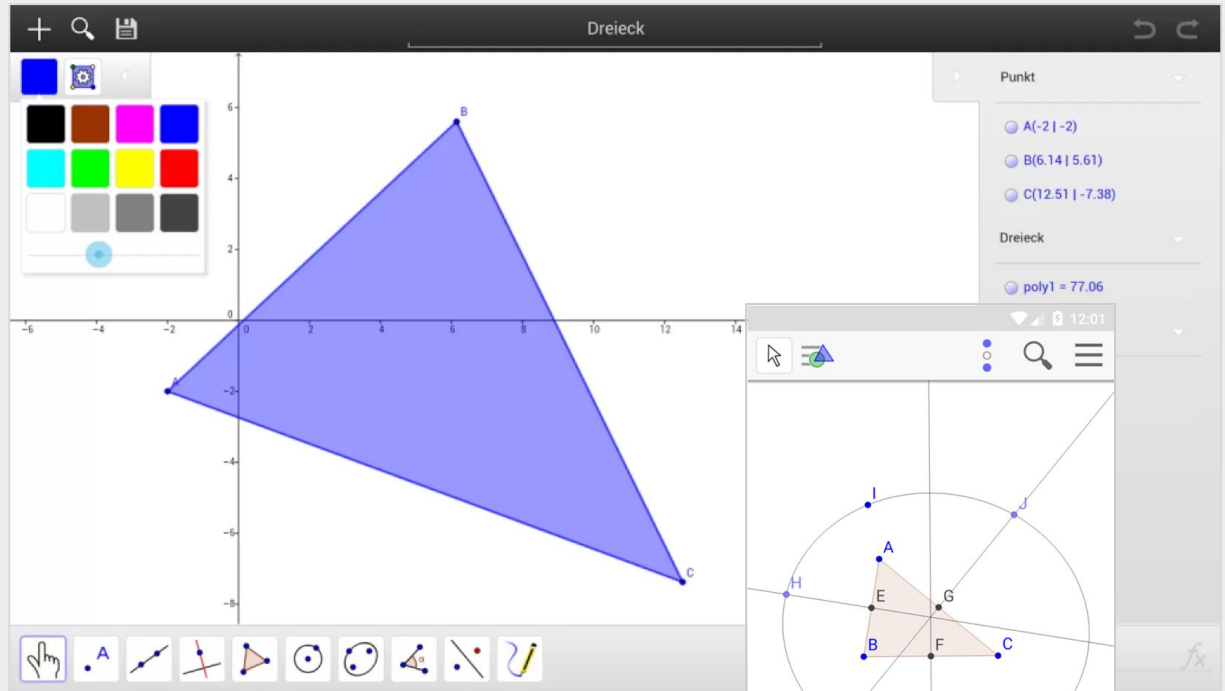
Gerade

- $a: -3.02x + 5.05y = -3.08$
- $b: 1.42x + 2.68y = 7.49$
- $c: -2.94x - 3.51y = -13.09$
- $d: 2.18x + 4.94y = 15.25$
- $k: 4.36x - 3.64y = 20.11$
- $l: 1.93x + 0.16v = 3.49$

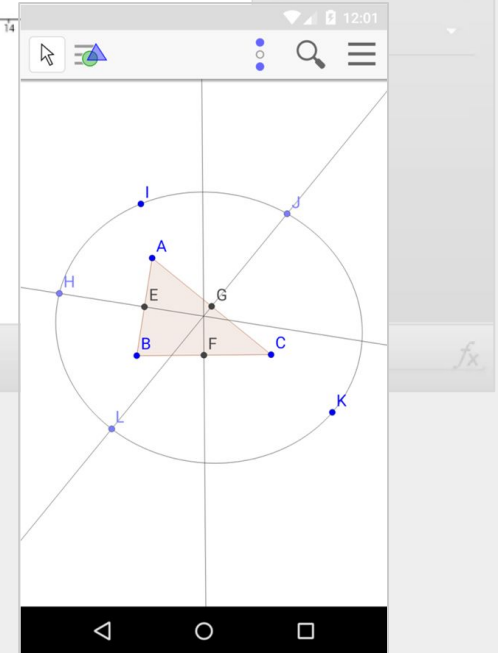
Eingabe:

The main window of the GeoGebra application displays a geometric construction. It features a coordinate grid with several lines and points. A blue-shaded triangle is formed by points A1, B1, and C1. A pink-shaded triangle is formed by points A2, B2, and C2. A red line passes through points A, B, and C. Dotted lines represent the perpendicular bisectors of the segments connecting the vertices of the two triangles. The intersection of these bisectors is marked as point O. The interface includes a toolbar with various geometric tools and a sidebar with a list of objects and their equations.

GeoGebra Mobile



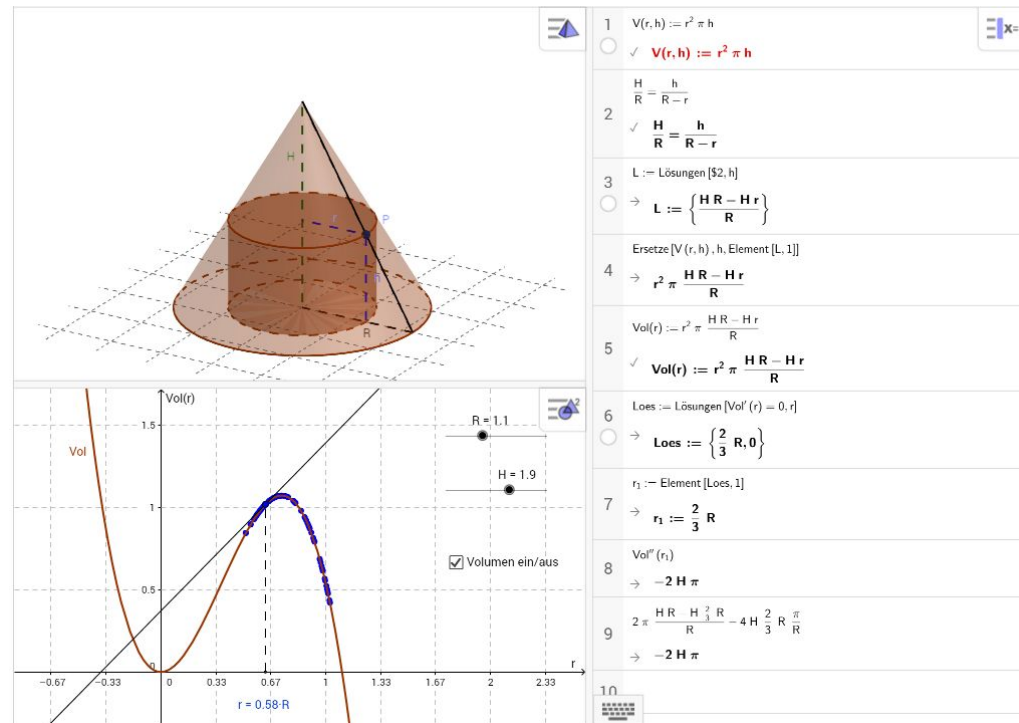
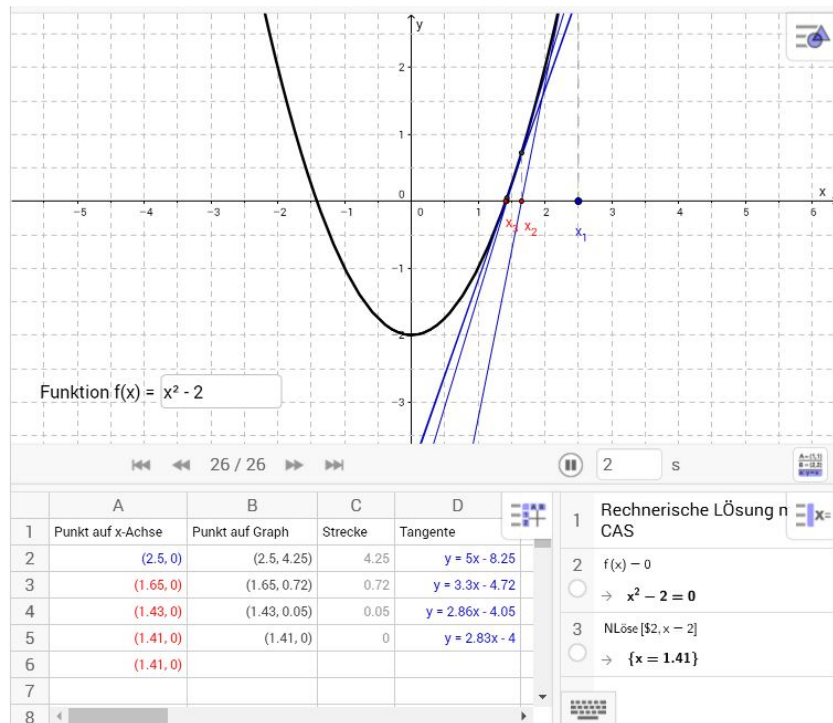
Tablet 2012



Smartphone 2015

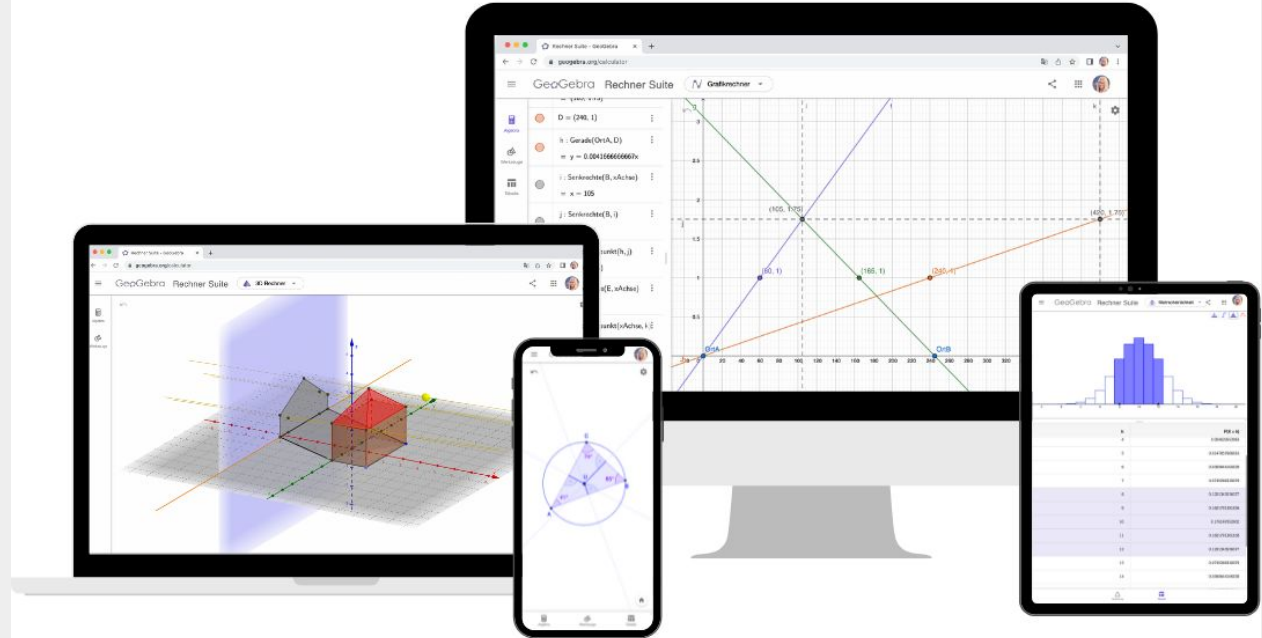


GeoGebra = Geometrie + Algebra + Tabellenkalkulation + 3D + Statistik



GeoGebra Apps

www.geogebra.org/download



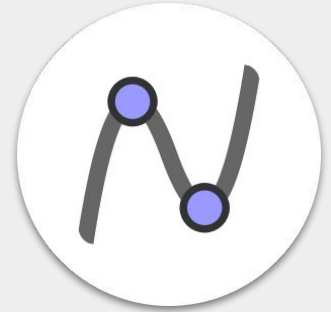
GeoGebra Apps



Taschenrechner



Geometrie



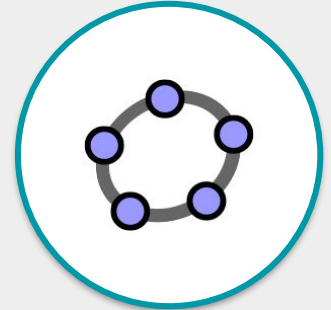
Grafikrechner



3D



CAS



Rechner
Suite

www.geogebra.org/download



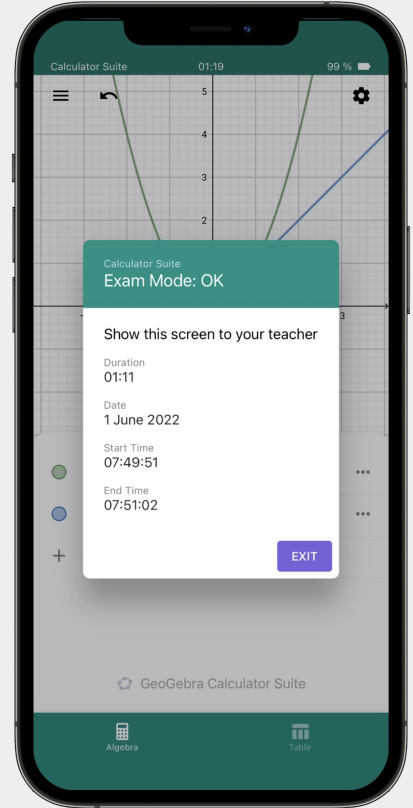
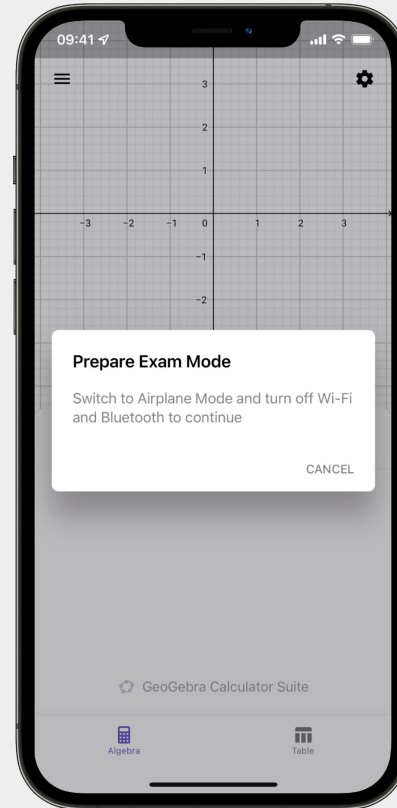
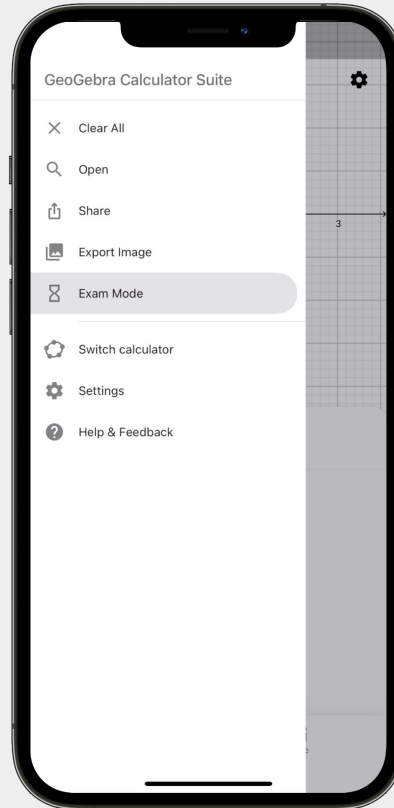


Prüfungsmodus

GeoGebra in Prüfungen

Prüfungs- modus

Demo



Prüfungs- modus

Tipps



- Üben im Prüfungsmodus
- „Notfallprotokoll“ für SchülerInnen
- Gleichzeitiger Start
- Infos zu GeoGebra bei Prüfungen:
<https://www.geogebra.org/m/m97r7cd4>
- Fragen zu Prüfungssticks und MDM-Lösungen:
→ support@geogebra.org



Aktuelle Neuerungen

GeoGebra Apps

Autocomplete
für Befehle



The screenshot displays the GeoGebra Calculator Suite interface. At the top, the title bar reads "GeoGebra Calculator Suite" with a "CAS" mode selector. The main workspace is divided into two panes: "Algebra" and "Table".

Algebra Pane:

- Function 1: $f(x) = 2x^2 + 3x$
- Function 2: $g(x) = 2x + 3$
- Intersection: $\text{Intersect}(f, g) \rightarrow \left\{ (1, 5), \left(\frac{-3}{2}, 0 \right) \right\}$
- Command: $\text{IntegralBetween}(g, \text{Function}, \text{Start } x - \text{Value}, \text{End } x - \text{Value})$

Table Pane:

- Command: $\text{IntegralBetween}(\text{Function}, \text{Function}, \text{Start } x\text{-Value}, \text{End } x\text{-Value})$

Autocomplete Menu:

- Integral
- IntegralBetween** (highlighted)
- IntegralSymbolic

The background shows a coordinate plane with a green parabola $f(x) = 2x^2 + 3x$ and a blue line $g(x) = 2x + 3$. Their intersection point is marked at $(1, 5)$.

GeoGebra Apps

Datentabelle



GeoGebra Graphing Calculator

Algebra
Tools
Table

x	y ₁
-2	1
-1	2
0	3
1	4
2	5

Hide points
Remove column
y₁ Statistics
x y₁ Statistics
Regression

Regression
Column y₁

Linear

Formula
 $a x + b$

Parameters
 $a = 1$
 $b = 3$

Coefficient of determination
 $R^2 = 1$

CLOSE PLOT

1 Variable Statistics
Column y₁

Standard Deviation
 $\sigma_{y_1} = 1.4142135623731$

Cardinality
 $n = 5$

Minimum
 $\text{Min}(y_1) = 1$

Lower quartile
 $Q1 = 1.5$

Median
 $\text{Median} = 3$

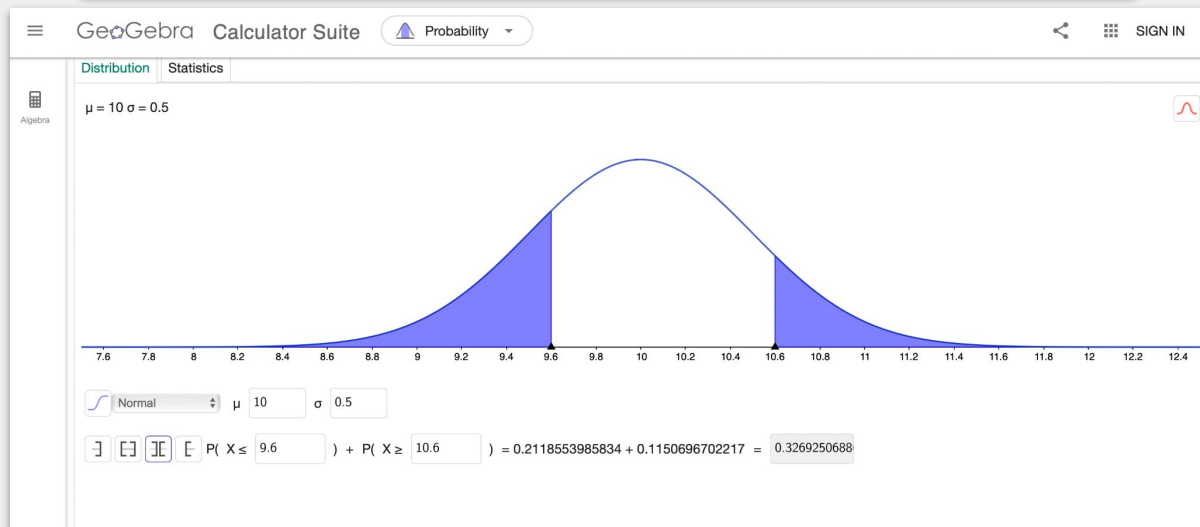
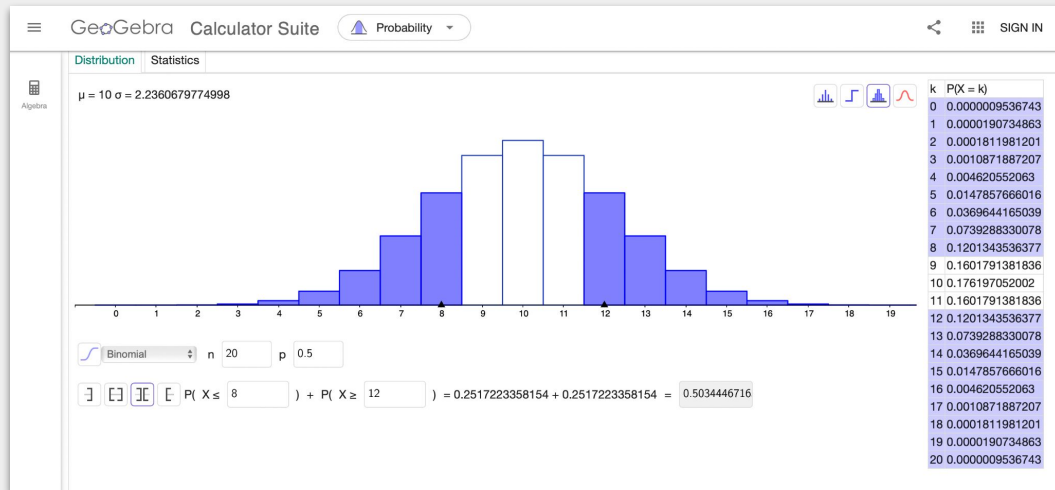
Upper quartile
 $Q3 = 4.5$

Maximum
 $\text{Max}(y_1) = 5$

CLOSE

Rechner Suite

Wahrscheinlichkeitsrechner

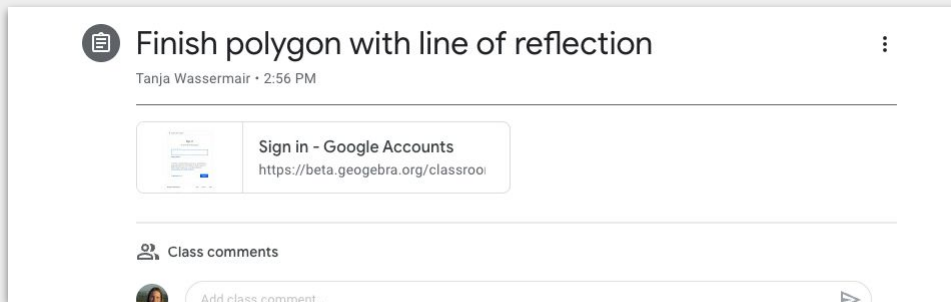
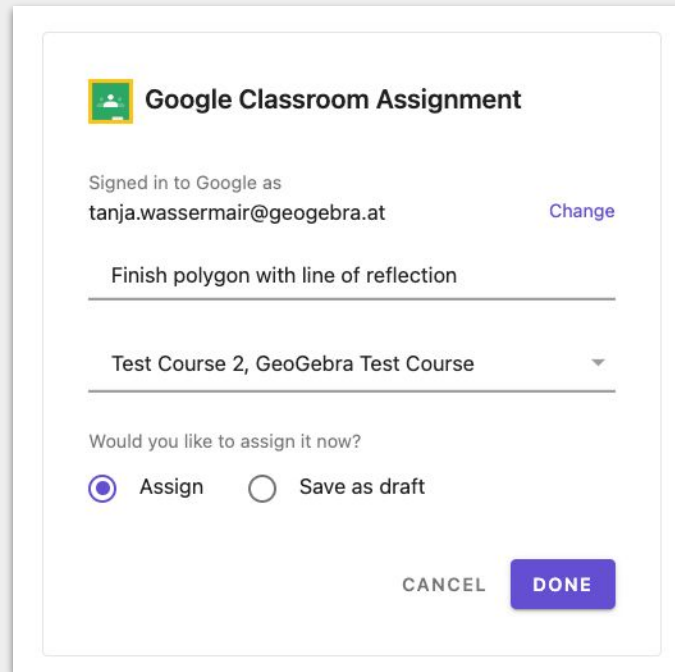


GeoGebra Classroom

Assignment in Google Classroom



Assign or
Save as draft



GeoGebra - Die Zukunft



Solver

Schritt-für-Schritt
Erklärungen

A screenshot of the GeoGebra Solver web application. The browser title is "GeoGebra Solver". The page features a header with a hamburger menu, the text "GeoGebra Solver", and a "BUTTON" label. Below the header is an illustration of a person sitting at a desk with a laptop, with a thought bubble containing the mathematical expressions $3x+2$ and x^2 . The main text reads "Solve any math problem with GeoGebra Solver". A search input field contains the equation $2(3x+2)=5(2x-1)$. To the right of the input field are icons for undo, redo, and a "SOLVE" button. Below the input field is a virtual keyboard with a header row containing "123 f(x) ABC #&-". The keyboard layout includes letters, numbers, and navigation keys.

GeoGebra Solver

Solve any math problem with GeoGebra Solver

$2(3x+2)=5(2x-1)$ SOLVE

123 f(x) ABC #&-

q w e r t y u i o p
a s d f g h j k l
^ z x c v b n m < > < > ←

<https://beta.geogebra.org/mathsolver>



Graspable Math

GeoGebra

Algebra Practice App

- Hilfestellungen
- Feedback
- “Übe dein Beispiel!”

Steps: 1

$$2 + 2a + 17 + a + 5 - 17 + 3a$$
$$2 + 2a + 17 + a + 5 - 17 + 3a$$

[SHOW HINT](#)

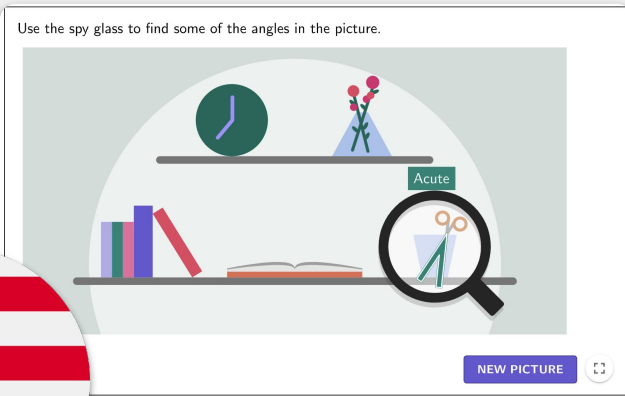
Always show hints Show key hint Show detail hint Highlight terms hint

SEE IN GGB SOLVER

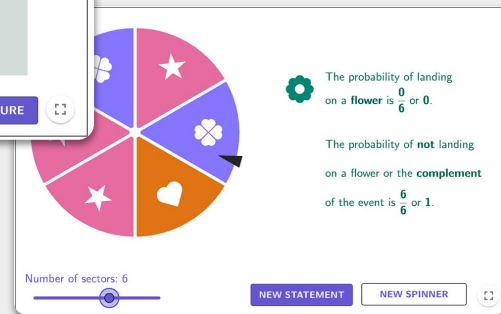



“Inhouse” GeoGebra Unterrichts- Materialien

(in Entwicklung)



[Vorschau der
Materialien](#)



Ähnliches Projekt
für Österreich 



GeoGebra Classroom

Feedback
Funktionalität
für Lehrer



A screenshot of the GeoGebra Classroom interface. At the top, there's a list of items: 'Pastry', 'cotton candy', 'sweet chocolate', 'gummies', 'pastry', 'dessert', 'oat cake', and 'donut.'. Below this is a 'Student name' field with a progress bar and '3 out of 5' messages. The main part of the screenshot is a chat window titled 'Chat to: Charlie Smith'. It shows two messages from 'You' (the teacher) to 'Charlie Smith' (the student). The first message says 'Hi Charlie! You did a great job, I am very happy to see how much you have improved in the last months!' and is marked as 'Task 1'. The second message says 'Hi Charlie!' and 'You did very well today', also marked as 'Task 1'. Below the chat is a task selection bar with 'Task 1', 'Task 2', 'Task 3', and 'Task 4'. The selected task 'Task 2' shows a text box with the message: 'Hello Charlie, well done today. Please, have a look at Task 19 at home. We can talk about it tomorrow if you have any problems with it.' There are also icons for text formatting and a send button.



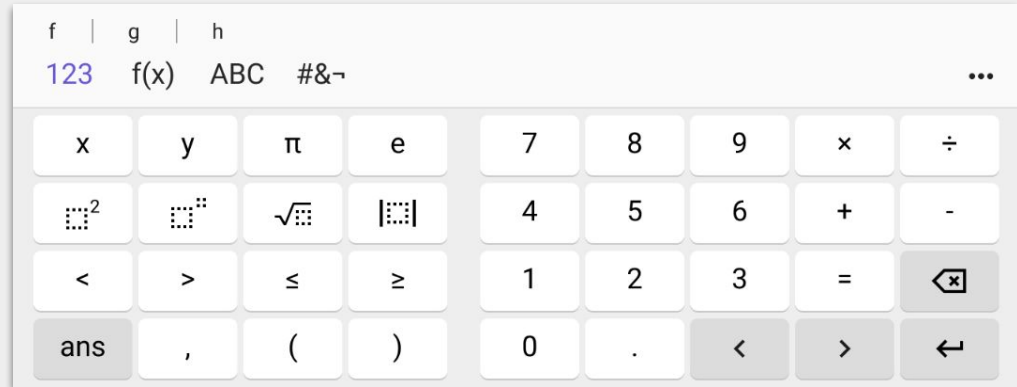
Student

Teacher

A screenshot of a student's task view. At the top, there's a grid. Below it, a question asks: 'How does the area of this new shape compare to the area of the original rectangle? Explain how you know.' There's a text input field with the placeholder 'Here would be my answer'. Below the input field, there's a message from 'Miss Paddington' (the teacher) to 'Charlie' (the student). The message says 'Hey Charlie, great job! Some really long comment from one of the teachers for one of the students. Some really long comment from one of the teachers for one of the students.' The message is marked as 'Task 2'.

Vereinfachte Eingabe

Vorschläge für bereits erstellte Objekte, die in GeoGebra Befehlen verwendet werden können.



Tabellen- kalkulation

Grafikrechner
CAS Rechner
Rechner Suite



GeoGebra Graphing Calculator

Algebra

	A	B	C	D
1	123456			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				

Tools

Table

Spreadsheet

Graphing Calculator

A screenshot of the GeoGebra Graphing Calculator interface. The top bar shows the title "GeoGebra Graphing Calculator" and a "SIGN IN" button. The left sidebar contains icons for "Algebra", "Tools", "Table", and "Spreadsheet". The main area is split into two panes. The left pane is a spreadsheet with columns A, B, C, and D, and rows 1 through 18. Cell A1 contains the number "123456". The right pane is a coordinate plane with x and y axes ranging from -6 to 6. The grid is visible, and the axes are labeled with integers.

GeoGebra Notizen

Mehrbenutzer

Echtzeit-Kollaboration



The screenshot shows the GeoGebra Notes interface. At the top, there's a header with the GeoGebra logo and the word "Notes". On the right side of the header, there are several circular profile icons of users. The main workspace contains a text box with the text "Linear Functions" and a name tag "Sophie" next to it. To the right of the text box is a coordinate plane with a green line passing through the origin (0,0). The line is labeled "f". The axes range from -6 to 6. A name tag "Thomas" is positioned next to the graph. Below the graph is a toolbar with icons for "Algebra", "Tools", and "Table". At the bottom of the interface, there is a large purple toolbar with various drawing tools: "Select Objects", "Pen", "Ruler", "Eraser", "Highlighter", and "Protractor". There are also color selection options and a zoom slider.

GeoGebra

Fragen? Ideen?

support@geogebra.org

Folge uns!
[@geogebra](https://twitter.com/geogebra)

