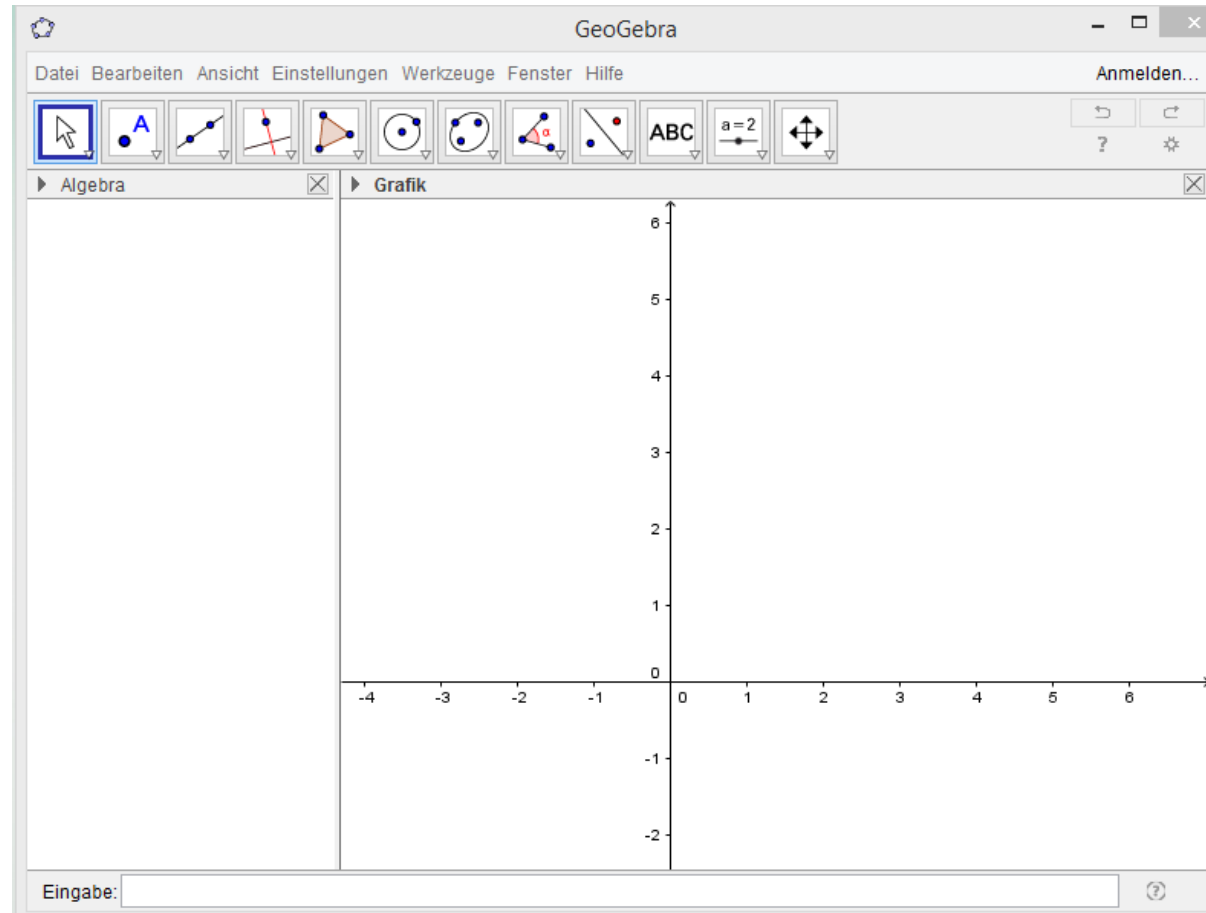


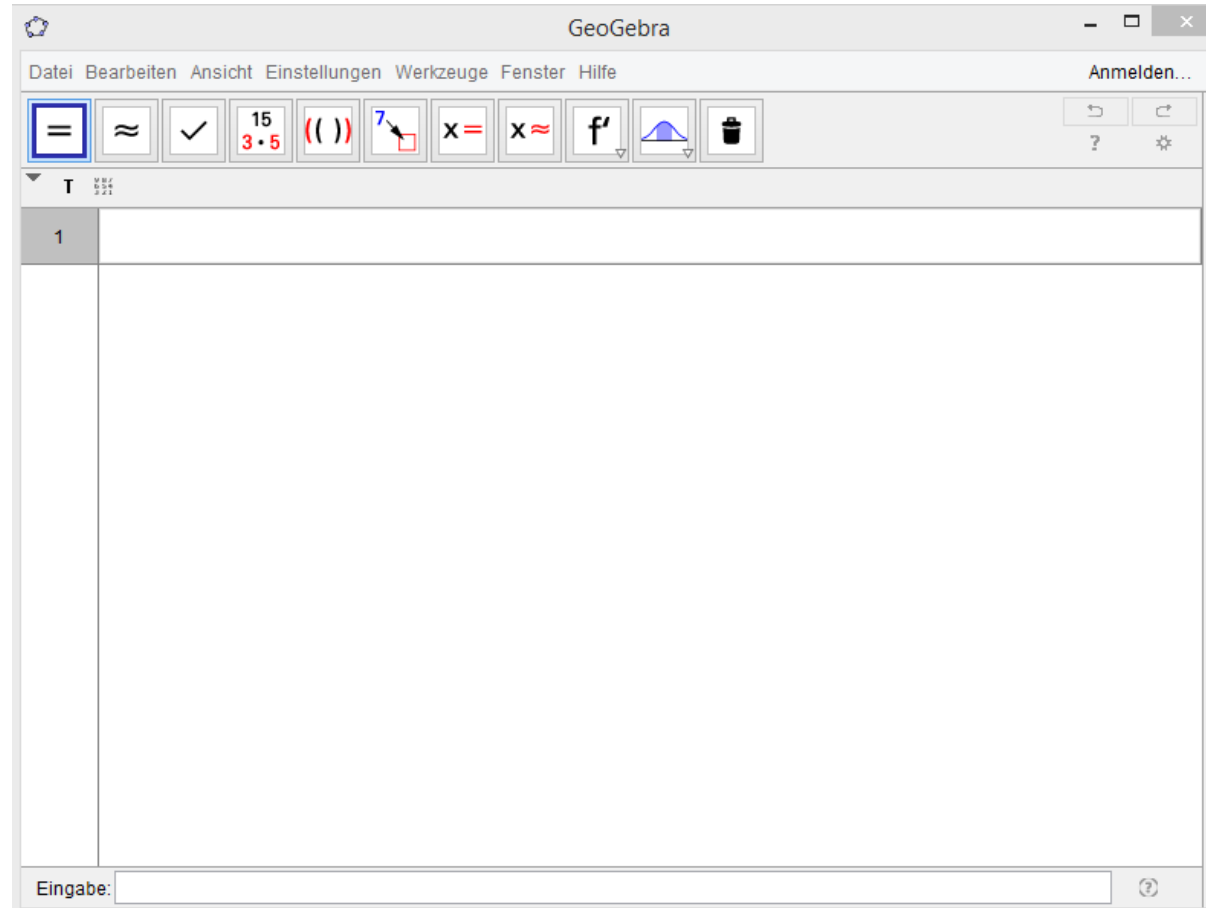
Technologie-Anleitung

Rechnen mit rationalen Zahlen („Bruchrechnen“)

Starte das Programm Geogebra.

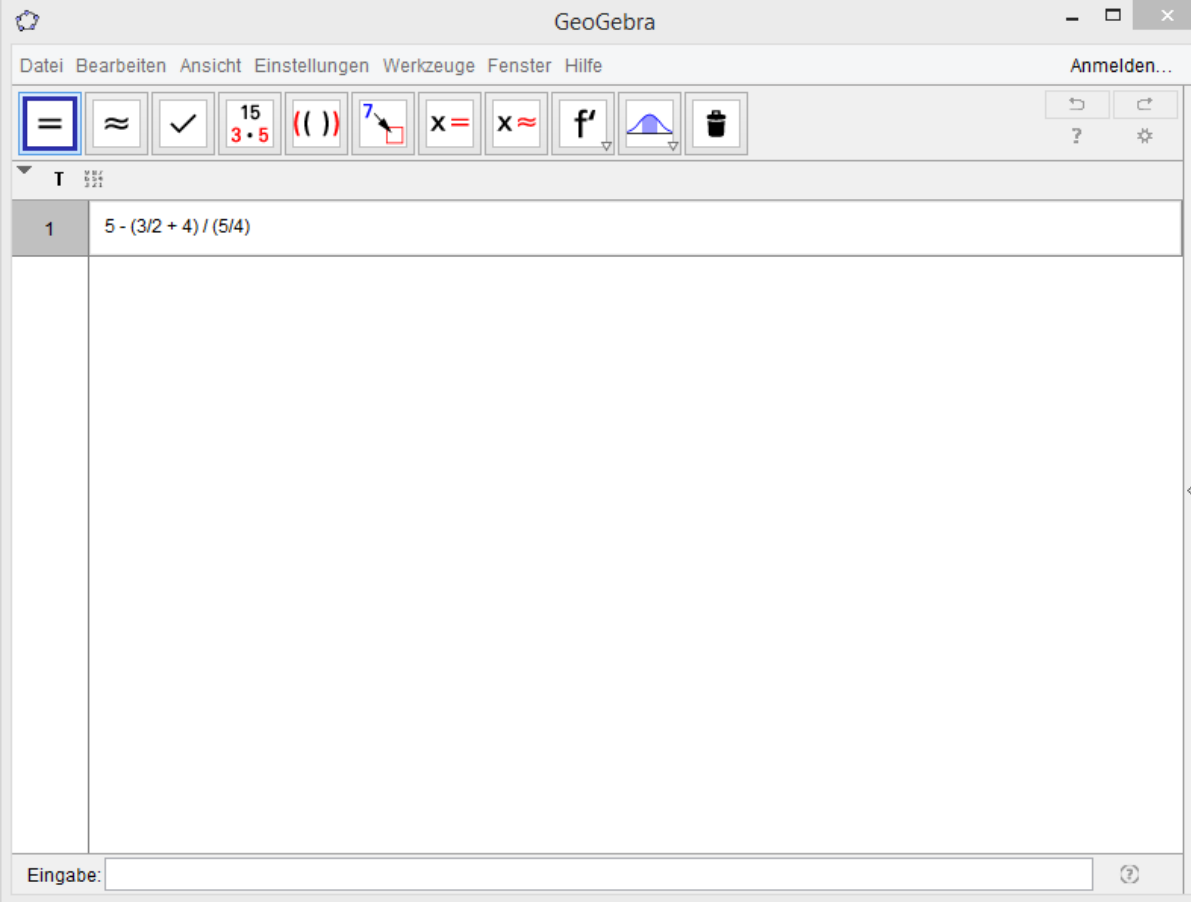


Wähle CAS (unter Ansicht).



Gib den Rechenausdruck ein.

z.B.: Lösungswege 5/Nr. 41 a)



The screenshot shows the GeoGebra software interface. At the top, there is a menu bar with options: Datei, Bearbeiten, Ansicht, Einstellungen, Werkzeuge, Fenster, Hilfe, and Anmelden... Below the menu bar is a toolbar with various icons for mathematical operations, including a blue-bordered equals sign icon, an approximation symbol, a checkmark, a fraction template (15 over 3*5), a parenthesis template (()), a cursor, a variable template (x=), an approximation symbol, a function template (f'), a graphing tool, and a trash can. Below the toolbar is a workspace area with a table-like structure. The first row contains the number '1' in a grey cell and the expression $5 - (3/2 + 4) / (5/4)$ in a white cell. At the bottom of the workspace, there is an input field labeled 'Eingabe:' with a question mark icon to its right.

Drücke „Enter“, damit das Ergebnis angezeigt wird.

The screenshot shows the GeoGebra software interface. At the top, there is a menu bar with options: Datei, Bearbeiten, Ansicht, Einstellungen, Werkzeuge, Fenster, Hilfe, and Anmelden... Below the menu bar is a toolbar with various icons for mathematical operations, including an equals sign, approximation, checkmark, fraction, parentheses, arrow, multiplication, division, derivative, and trash. The main workspace is divided into two rows. Row 1 contains the expression $5 - (3/2 + 4) / (5/4)$ and its result $\rightarrow \frac{3}{5}$. Row 2 is empty. At the bottom, there is an input field labeled "Eingabe:" with a question mark icon to its right.

Beachte dabei folgendes:

- Manche Rechenzeichen sind bei Geogebra anders.

: (Division) \rightarrow / (z.B.: $3 : 5$ wird zu $3/5$)

· (Multiplikation) \rightarrow * (z.B.: $3 \cdot 5$ wird zu $3*5$)

² (Quadrieren) \rightarrow ^2

- Manchmal wird eine extra Klammer benötigt.

Z.B.: $1/2 / 1/4$ ergibt in Geogebra ohne Klammersetzung $1/8$.
besser: $1/2 / (1/4)$

Berechne nun selbst die Ergebnisse.

Lösungswege 5 / Nr. 41 + 42 b) + c)

The screenshot shows the GeoGebra software interface. At the top, there is a menu bar with options: Datei, Bearbeiten, Ansicht, Einstellungen, Werkzeuge, Fenster, Hilfe, and Anmelden... Below the menu bar is a toolbar containing various mathematical symbols and tools, including an equals sign, an approximation symbol, a checkmark, a fraction template, a parenthesis template, a drawing tool, a variable template, an approximation symbol, a function template, a graphing tool, and a trash icon. Below the toolbar is a list of five problems, each with a radio button and a text input field. The fifth problem is highlighted. At the bottom, there is an input field labeled 'Eingabe:'.

1	$(2 - (3/4)/5)^2 / (4 + 2/3 * 5)$
2	$5 / (1 + (6/5)) * (7/3) - 1$
3	$(3/5 + 2 * 5/3) * 2/3 - 7/4$
4	$(1 + 1/2 + 1/3 + 1/4)^2$
5	

Eingabe:

Lösung:

The screenshot shows the GeoGebra calculator interface. The window title is "GeoGebra". The menu bar includes "Datei", "Bearbeiten", "Ansicht", "Einstellungen", "Werkzeuge", "Fenster", "Hilfe", and "Anmelden...". The toolbar contains various mathematical symbols and functions. The main area displays a list of five problems, each with a radio button to select it. The first four problems are solved, and the fifth is currently selected.

Problem	Expression	Result
1	$(2 - (3/4) / 5)^2 / (4 + 2/3 * 5)$	$\rightarrow \frac{4107}{8800}$
2	$5 / (1 + (6/5)) * (7/3) - 1$	$\rightarrow \frac{142}{33}$
3	$(3/5 + 2 * 5/3) * 2/3 - 7/4$	$\rightarrow \frac{157}{180}$
4	$(1 + 1/2 + 1/3 + 1/4)^2$	$\rightarrow \frac{625}{144}$
5		

Eingabe:

Ich hoffe, die Anleitung war
hilfreich!