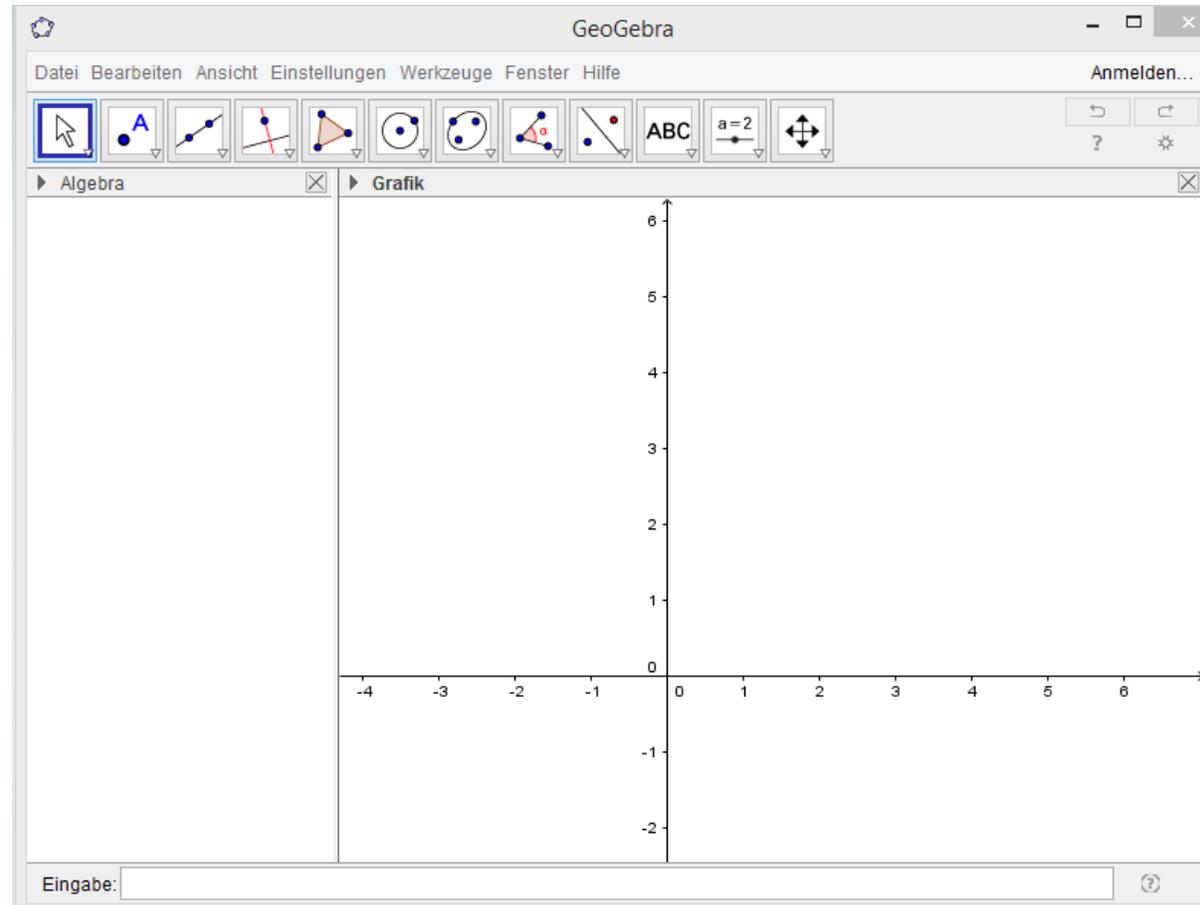


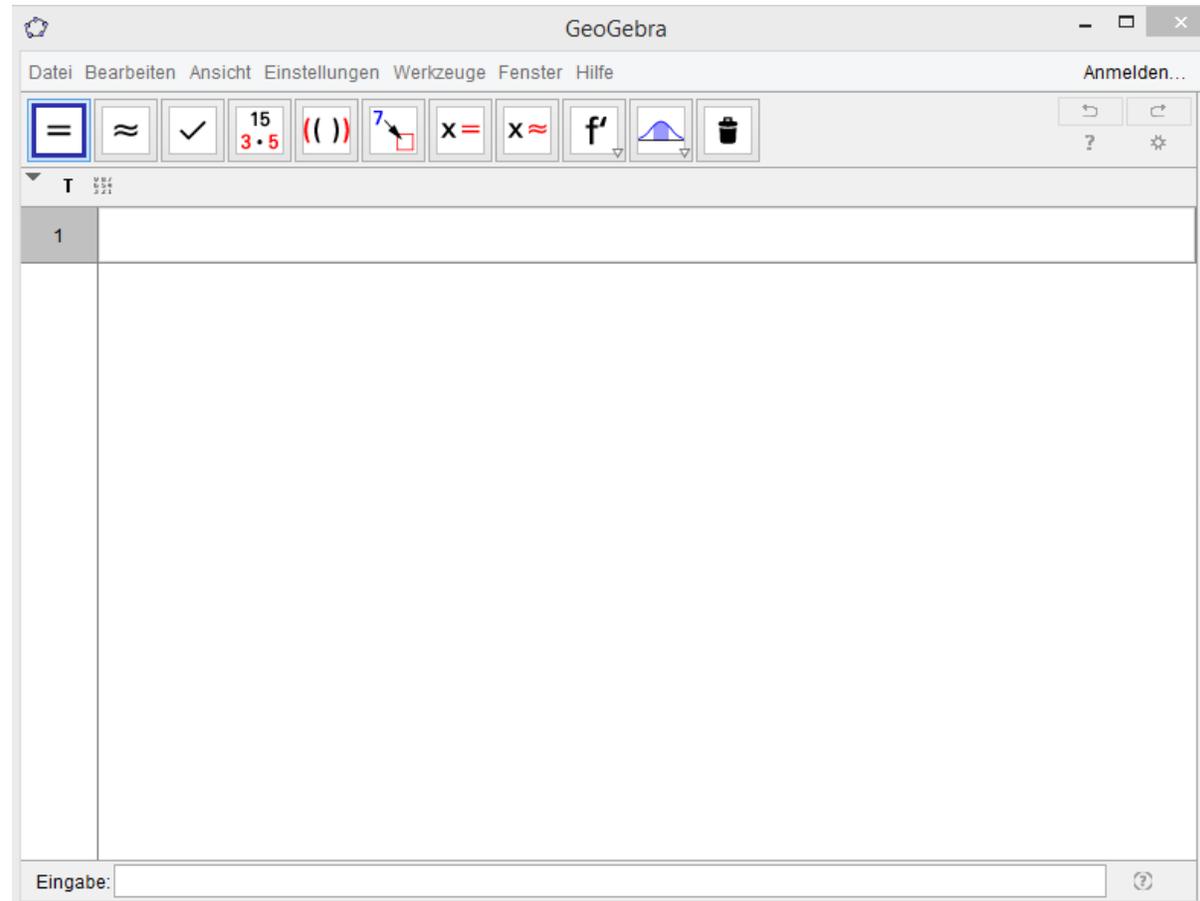
Technologie-Anleitung

Lineare Gleichungssysteme in zwei Variablen lösen

Starte das Programm Geogebra.



Wähle CAS (unter Ansicht).



Lineare Gleichungssysteme in zwei Variablen lösen

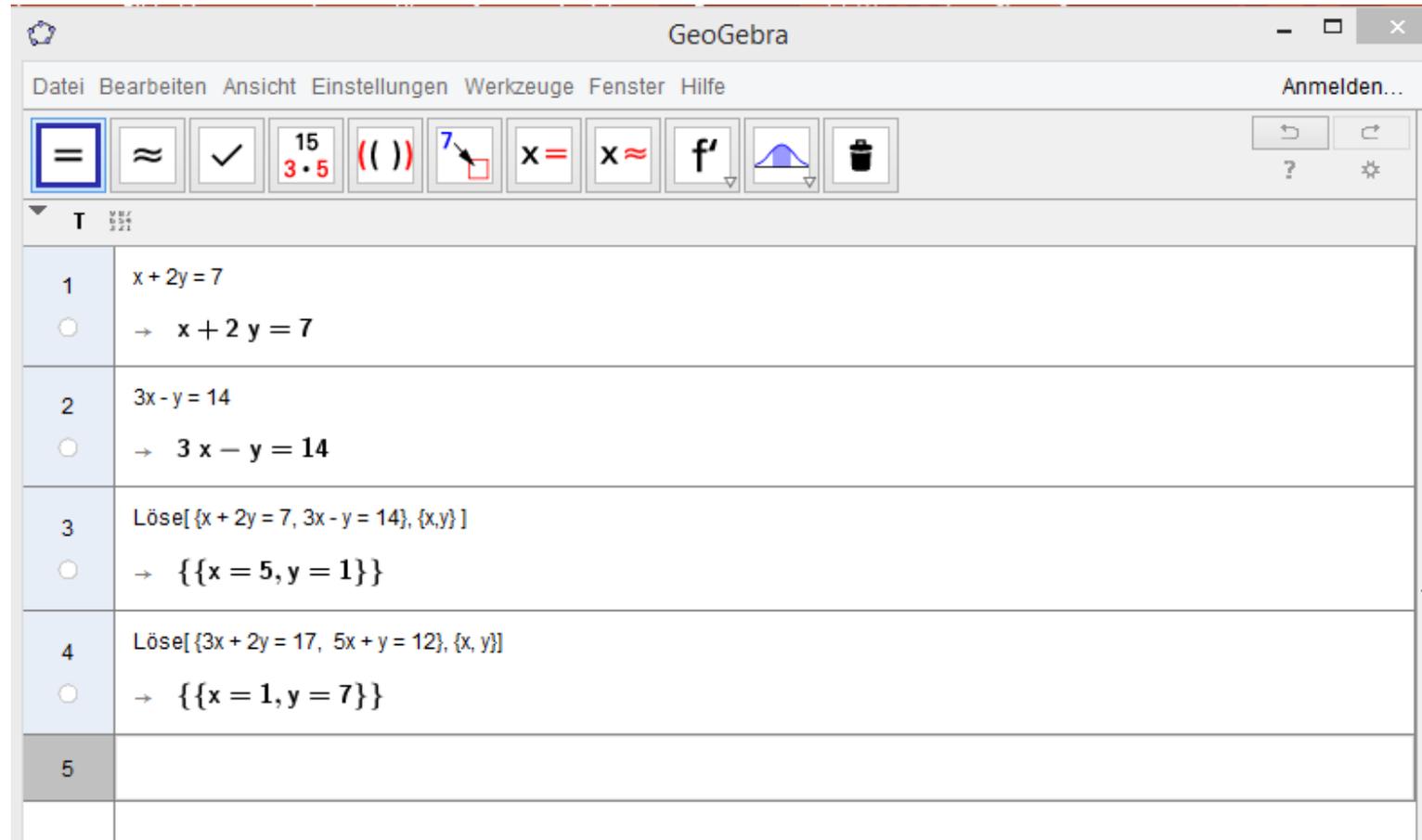
Um ein Gleichungssystem in Geogebra zu lösen, kann man den Befehl `Löse[<Liste von Gleichungen>, <Liste von Variablen>]` verwenden.

Die Listen werden dabei immer in geschwungenen Klammern angegeben.

Um sich die Arbeit zu vereinfachen, kann man schon geschriebenen Gleichungen durch Anklicken in den Befehl kopieren.

Lineare Gleichungssysteme lösen

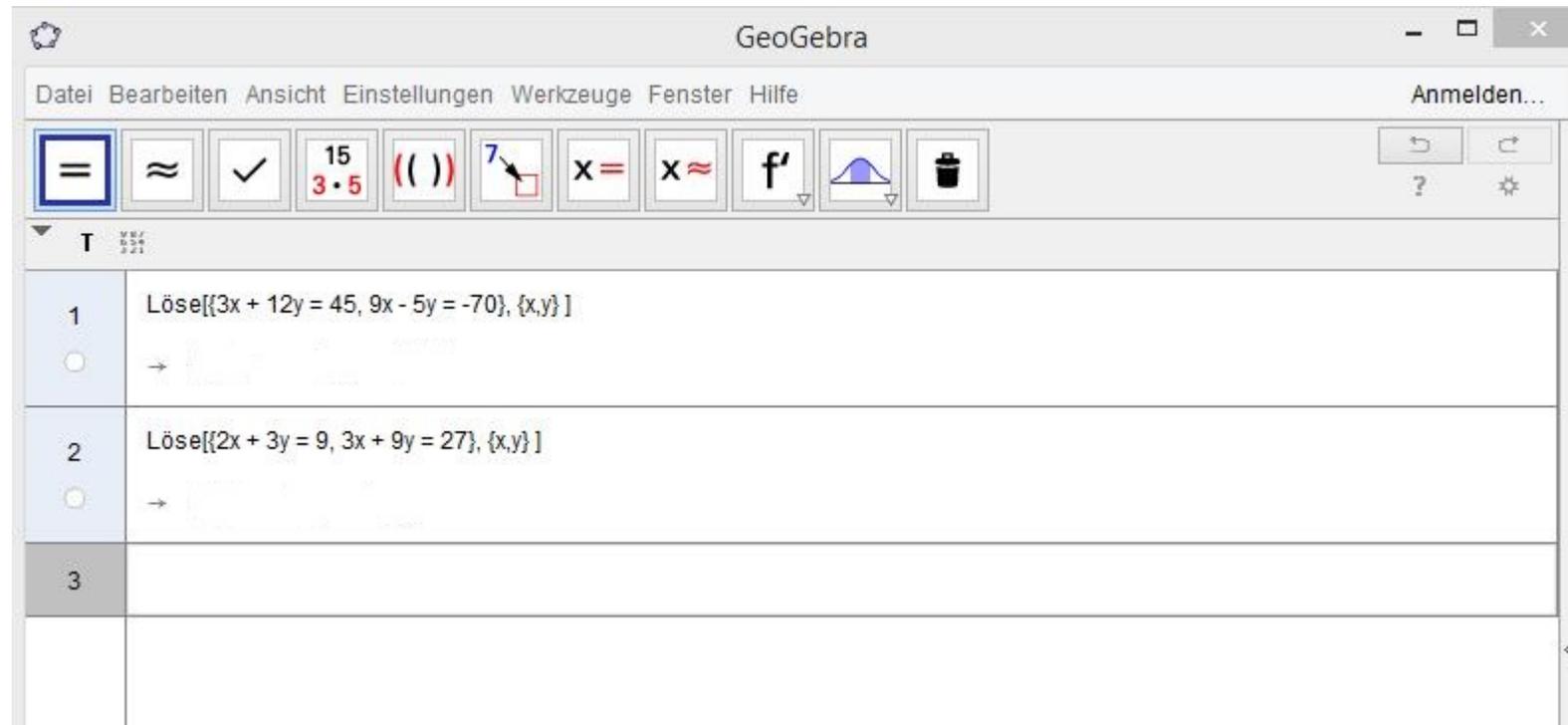
z.B. Lösungswege 5 / 255 + 257



The screenshot shows the GeoGebra application window. The title bar reads "GeoGebra". Below the title bar is a menu bar with "Datei", "Bearbeiten", "Ansicht", "Einstellungen", "Werkzeuge", "Fenster", and "Hilfe". To the right of the menu bar is a button labeled "Anmelden...". Below the menu bar is a toolbar with various icons: an equals sign, an approximation symbol, a checkmark, a fraction $\frac{15}{3 \cdot 5}$, parentheses $(())$, a cursor with the number 7, $x =$, $x \approx$, a derivative symbol f' , a graphing icon, and a trash can. Below the toolbar is a panel with a dropdown menu showing "T" and a list of five items. Each item has a radio button and a text area containing a linear equation and its solution.

Item	Equation	Solution
1	$x + 2y = 7$	$\rightarrow x + 2y = 7$
2	$3x - y = 14$	$\rightarrow 3x - y = 14$
3	Löse[$\{x + 2y = 7, 3x - y = 14\}, \{x, y\}$]	$\rightarrow \{\{x = 5, y = 1\}\}$
4	Löse[$\{3x + 2y = 17, 5x + y = 12\}, \{x, y\}$]	$\rightarrow \{\{x = 1, y = 7\}\}$
5		

Versuche es nun selbst.
z.B. Lösungswege 5/ 258 c) + d)



The screenshot shows the GeoGebra application window. The title bar reads "GeoGebra". Below it is a menu bar with "Datei", "Bearbeiten", "Ansicht", "Einstellungen", "Werkzeuge", "Fenster", and "Hilfe". On the right of the menu bar is "Anmelden...". Below the menu bar is a toolbar with various icons: an equals sign, an approximation symbol, a checkmark, a fraction $\frac{15}{3 \cdot 5}$, parentheses $(())$, a power symbol 7 , a variable $x =$, an approximation symbol $x \approx$, a derivative symbol f' , a graphing icon, and a trash can. Below the toolbar is a list of problems:

1	Löse[$\{3x + 12y = 45, 9x - 5y = -70\}, \{x,y\}$]
<input type="radio"/>	→
2	Löse[$\{2x + 3y = 9, 3x + 9y = 27\}, \{x,y\}$]
<input type="radio"/>	→
3	

Lösung:

The screenshot shows the GeoGebra application window. The title bar reads "GeoGebra". The menu bar includes "Datei", "Bearbeiten", "Ansicht", "Einstellungen", "Werkzeuge", "Fenster", and "Hilfe". On the right of the menu bar is a button labeled "Anmelden...". Below the menu bar is a toolbar with various icons: an equals sign (highlighted with a blue border), an approximation symbol, a checkmark, a fraction $\frac{15}{3 \cdot 5}$, parentheses $(())$, a square root symbol with a red square, $x =$, $x \approx$, a derivative symbol f' , a normal distribution curve, and a trash can. To the right of the toolbar are buttons for undo, redo, help, and settings. Below the toolbar is a list of calculations:

	T
1	Löse[$\{3x + 12y = 45, 9x - 5y = -70\}, \{x,y\}$] <input type="radio"/> $\rightarrow \{\{x = -5, y = 5\}\}$
2	Löse[$\{2x + 3y = 9, 3x + 9y = 27\}, \{x,y\}$] <input type="radio"/> $\rightarrow \{\{x = 0, y = 3\}\}$
3	

Ich hoffe, die Anleitung war
hilfreich!