

Tägliche Übung

20 min

1.

AH S. 13

2. Löse das Gleichungssystem rechnerisch und zeichnerisch!

$$\begin{array}{l|l} y - 5 = 2x & y = 2x + 5 \\ y + 4x = -1 & y = -4x - 1 \end{array} \quad y = y$$

$$2x + 5 = -4x - 1 \quad /+4x$$

$$6x + 5 = -1 \quad /-5$$

$$6x = -6 \quad /:6$$

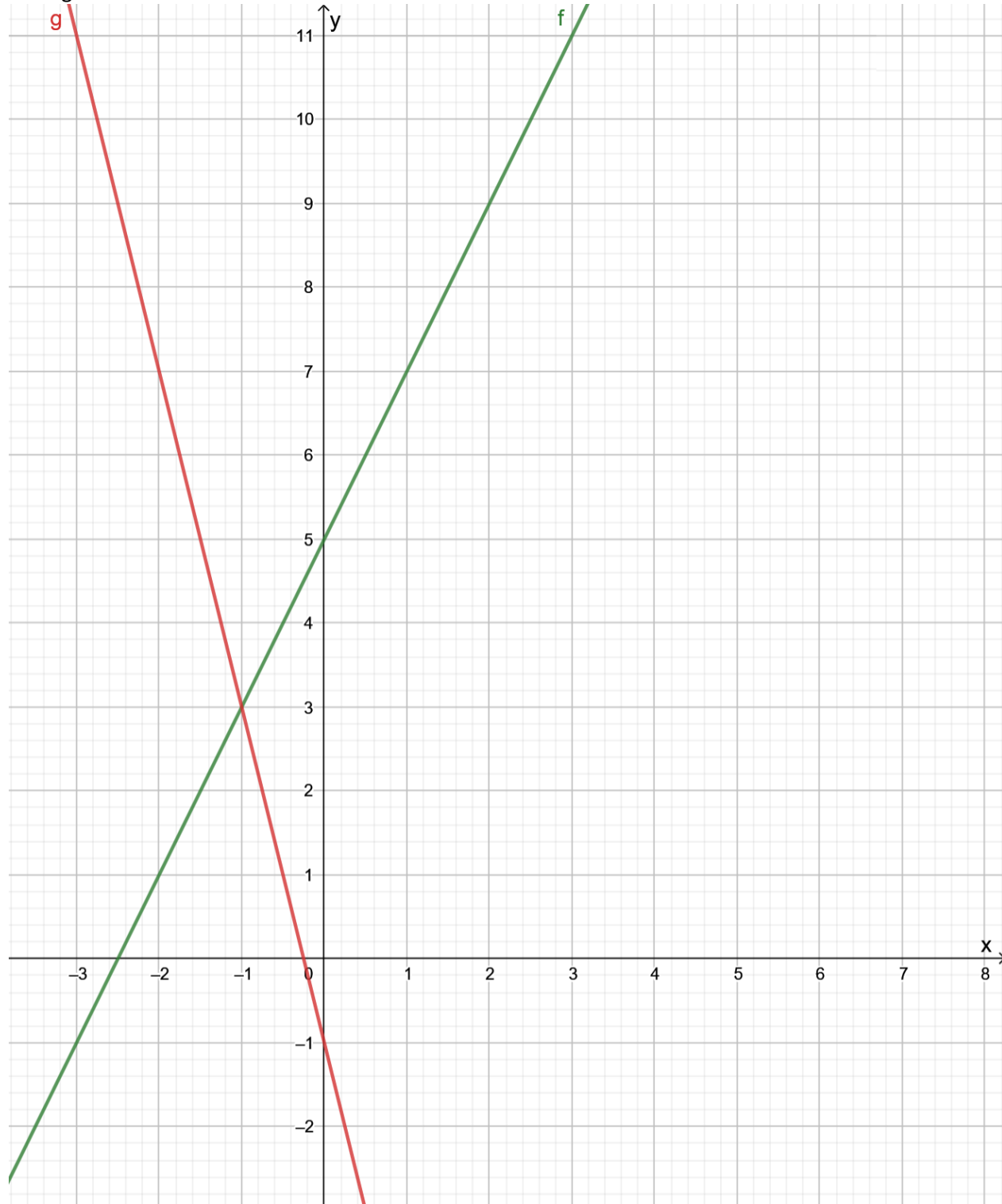
$$\underline{\underline{x = -1}} \quad \text{in } y = 2x + 5$$

$$y = 2 \cdot (-1) + 5$$

$$y = -2 + 5$$

$$\underline{\underline{y = 3}}$$

in Diagramm



4. Löse das Gleichungssystem. Verfahre zweckmäßig. Führe zuletzt die Probe durch.

a) $\begin{cases} y = 2x + 2 \\ y = 3x - 2 \end{cases}$	c) $\begin{cases} x = y - 8 \\ x = 3y - 48 \end{cases}$	e) $\begin{cases} y + 3x = 18 \\ 2x + y = 11 \end{cases}$	g) $\begin{cases} 4x + y = 46 \\ y - x = 4 \end{cases}$
b) $\begin{cases} y - 2x = 5 \\ y = x + 10 \end{cases}$	d) $\begin{cases} y = x - 24 \\ 144 + y = 4x \end{cases}$	f) $\begin{cases} x + y = 16 \\ x = 2y + 10 \end{cases}$	h) $\begin{cases} x - 8y = 9 \\ 3y + x = 31 \end{cases}$

e.)

$\begin{cases} y + 3x = 18 \\ 2x + y = 11 \end{cases}$	$\begin{aligned} 18 - 3x &= 11 - 2x & / +2x \\ 18 - x &= 11 & / -18 \text{ } / :(-1) \\ \underline{x = 7} & & \text{in } y = 18 - 3x \\ y &= 18 - 3 \cdot 7 \\ \underline{y = -3} & & \end{aligned}$	$L = \{(7 -3)\}$
--	--	--------------------

f.)

$\begin{cases} x + y = 16 \\ x = 2y + 10 \end{cases}$	$\begin{aligned} x &= 16 - y & 16 - y &= 2y + 10 & / +y \\ 16 &= 3y + 10 & & & / -10 \text{ } / :3 \\ \underline{y = 2} & & \text{in } x &= 2 \cdot 2 + 10 \\ x &= 4 + 10 \\ \underline{x = 14} & & \end{aligned}$	$L = \{(14 2)\}$
---	--	--------------------

g.)

$\begin{cases} 4x + y = 46 \\ y - x = 4 \end{cases}$	$\begin{aligned} y &= 46 - 4x & 46 - 4x &= 4 + x & / -x \\ y &= 4 + x & 46 - 5x &= 4 & / -46 \\ -5x &= -42 & & & / :(-5) \\ \underline{x = 8,4} & & \text{in } y &= 4 + 8,4 \\ y &= 12,4 & & \end{aligned}$	$L = \{(8,4 12,4)\}$
--	---	------------------------

h.)

$\begin{cases} x - 8y = 9 \\ 3y + x = 31 \end{cases}$	$\begin{aligned} x &= 9 + 8y & 9 + 8y &= 31 - 3y & / +3y \\ x &= 31 - 3y & 9 + 11y &= 31 & / -9 \\ 11y &= 22 & & & / :11 \\ \underline{y = 2} & & \text{in } x &= 31 - 3y \\ x &= 31 - 3 \cdot 2 \\ x &= 31 - 6 \\ \underline{x = 25} & & \end{aligned}$	$L = \{(25 2)\}$
---	--	--------------------