

1. a)

$$\begin{array}{rcl}
 I & y & = 2x - 6 \\
 II & y & = -x + 6 \\
 \hline
 I = II & 2x - 6 & = -x + 6 \quad | + x \\
 & 3x - 6 & = 6 \quad | + 6 \\
 & 3x & = 12 \quad | : 3 \\
 & x & = 4 \\
 \hline
 x \text{ in } I & y & = 2 \cdot 4 - 6 \\
 & y & = 2
 \end{array}$$

Probe in II:

$$\left. \begin{array}{l} \text{l. S.:} \\ \text{r. S.: } -4 + 6 = \end{array} \right\} \begin{array}{l} 2 \\ 2 \end{array} \checkmark$$

Lösungsmenge:

$$L = \{(4/2)\}$$

b)

$$\begin{array}{rcl}
 I & x & = 3y - 18 \\
 II & x & = -5y + 14 \\
 \hline
 I = II & 3y - 18 & = -5y + 14 \quad | + 5y \\
 & 8y - 18 & = 14 \quad | + 18 \\
 & 8y & = 32 \quad | : 8 \\
 & y & = 4 \\
 \hline
 y \text{ in } I & x & = 3 \cdot 4 - 18 \\
 & x & = -6
 \end{array}$$

Probe in II:

$$\left. \begin{array}{l} \text{l. S.:} \\ \text{r. S.: } -5 \cdot 4 + 14 = -20 + 14 = \end{array} \right\} \begin{array}{l} -6 \\ -6 \end{array} \checkmark$$

Lösungsmenge:

$$L = \{(-6/4)\}$$

c)

$$\begin{array}{rcl}
 I & 2x & = 14y - 1 \\
 II & 2x & = 8y + 2 \\
 \hline
 I = II & 14y - 1 & = 8y + 2 \quad | - 8y \\
 & 6y - 1 & = 2 \quad | + 1 \\
 & 6y & = 3 \quad | : 6 \\
 & y & = 0,5 \\
 \hline
 y \text{ in } I & 2x & = 14 \cdot 0,5 - 1 \\
 & 2x & = 6 \quad | : 2 \\
 & x & = 3
 \end{array}$$

Probe in II:

$$\left. \begin{array}{l} \text{l. S.: } 2 \cdot 3 = 6 \\ \text{r. S.: } 8 \cdot 0,5 + 2 = 4 + 2 = \end{array} \right\} \begin{array}{l} 6 \\ 6 \end{array} \checkmark$$

Lösungsmenge:

$$L = \{(3/0,5)\}$$

d)

$$\begin{array}{rcl}
 I & y & = 4x + 13 \\
 II & y & = -x - 2 \\
 \hline
 I = II & 4x + 13 & = -x - 2 & | + x \\
 & 5x + 13 & = -2 & | - 13 \\
 & 5x & = -15 & | : 5 \\
 & x & = -3 \\
 \hline
 x \text{ in } I & y & = 4 \cdot (-3) + 13 \\
 & y & = -12 + 13 \\
 & y & = 1
 \end{array}$$

Probe in II :

$$\begin{array}{l}
 \text{l. S.:} \\
 \text{r. S.: } -(-3) - 2 = 3 - 2 = 1
 \end{array}
 \left. \begin{array}{l} 1 \\ 1 \end{array} \right\} \checkmark$$

Lösungsmenge:

$$L = \{(-3/1)\}$$

e)

$$\begin{array}{rcl}
 I & y & = -4x - 3 \\
 II & y & = -2x - 1 \\
 \hline
 I = II & -4x - 3 & = -2x - 1 & | + 4x \\
 & -3 & = 2x - 1 & | + 1 \\
 & -2 & = 2x & | : 2 \\
 & -1 & = x \\
 \hline
 x \text{ in } I & y & = -4 \cdot (-1) - 3 \\
 & y & = 4 - 3 \\
 & y & = 1
 \end{array}$$

Probe in II :

$$\begin{array}{l}
 \text{l. S.:} \\
 \text{r. S.: } -2 \cdot (-1) - 1 = 2 - 1 = 1
 \end{array}
 \left. \begin{array}{l} 1 \\ 1 \end{array} \right\} \checkmark$$

Lösungsmenge:

$$L = \{(-1/1)\}$$

f)

$$\begin{array}{rcl}
 I & y & = 5x + 4 \\
 II & y & = 2x + 1 \\
 \hline
 I = II & 5x + 4 & = 2x + 1 & | - 2x \\
 & 3x + 4 & = 1 & | - 4 \\
 & 3x & = -3 & | : 3 \\
 & x & = -1 \\
 \hline
 x \text{ in } I & y & = 5 \cdot (-1) + 4 \\
 & y & = -5 + 4 \\
 & Y & = -1
 \end{array}$$

Probe in II :

$$\begin{array}{l}
 \text{l. S.:} \\
 \text{r. S.: } 2 \cdot (-1) + 1 = -2 + 1 = -1
 \end{array}
 \left. \begin{array}{l} -1 \\ -1 \end{array} \right\} \checkmark$$

Lösungsmenge:

$$L = \{(-1/-1)\}$$