## Übungsaufgaben zu linearen Gleichungssystemen:

1.

$$\begin{array}{rr} \text{I:} & 3u+2v+w = 11 \\ \text{II:} & -4u+2v+5w = -21 \\ \text{III:} & 2u+9v-2w = 10 \end{array}$$

2.

$$\begin{array}{rr} \text{I:} & 2x+z, = -6 \\ \text{II:} & -y+5z = -8 \\ \text{III:} & -7x-y+3z = 10 \end{array}$$

3.

$$\begin{array}{rr} \text{I:} & 2x+z = -6 \\ \text{II:} & -y+5z = -8 \\ \text{III:} & 4x+y-3z = -4 \end{array}$$

4.

$$\begin{array}{rr} \text{I:} & 2x+z = -6 \\ \text{II:} & -y+5z = -8 \\ \text{III:} & 4x+y-3z = -2 \end{array}$$

5.

$$\begin{array}{rr} \text{I:} & -a-b = -7 \\ \text{II:} & -2a+5b+8c = 0 \\ \text{III:} & -3a+4b+8c = -7 \end{array}$$

6.

$$\begin{array}{rr} \text{I:} & -a-b = 0 \\ \text{II:} & -2a+5b+8c = -7 \\ \text{III:} & -3a+4b+8c = 0 \end{array}$$

## Lösungen:

1. $u = 4, v = 0, w = -1$
2. $x = y = z = -2$
3. $x = -3 - \frac{1}{2}t, y = 8 + 8t, z = t$
4. $\{\}$
5. $a = 5 + \frac{8}{7}t, b = 2 - \frac{8}{7}t, c = t$
6. $\{\}$