

## Lösen von linearen Gleichungssystemen mit drei und vier Unbekannten

1. 
$$\begin{array}{l} \text{I} \quad x + 2y + z = 4 \\ \text{II} \quad 2x + y + 3z = 6 \\ \text{III} \quad 3x + y + 2z = 6 \end{array}$$
2. 
$$\begin{array}{l} \text{I} \quad 2x + 2y - 2z = 0 \\ \text{II} \quad 2x - 2y + z = 1 \\ \text{III} \quad 3x + 4y - z = 8 \end{array}$$
3. 
$$\begin{array}{l} \text{I} \quad 2x + 2y - 2z = 4 \\ \text{II} \quad 2x - 2y + z = 5 \\ \text{III} \quad 3x + 4y - z = 14 \end{array}$$
4. 
$$\begin{array}{l} \text{I} \quad 3x + 6y + 9z = 18 \\ \text{II} \quad 4x - 4y + 8z = -4 \\ \text{III} \quad 2x + 4y - 4z = 2 \end{array}$$
5. 
$$\begin{array}{l} \text{I} \quad 2x + 6y + 4z = -12 \\ \text{II} \quad -2x - 4y + 2z = 11 \\ \text{III} \quad -2x + 4y + 4z = -4 \end{array}$$
6. 
$$\begin{array}{l} \text{I} \quad 4x + 6y + 4z = 9 \\ \text{II} \quad -8x - 4y + 2z = -5 \\ \text{III} \quad -2x + 4y + 4z = 5,5 \end{array}$$
7. 
$$\begin{array}{l} \text{I} \quad 2x - 2y + 2z = 10 \\ \text{II} \quad -3x + 6y - 3z = 0 \\ \text{III} \quad -5x + 15y - 10z = -5 \end{array}$$
8. 
$$\begin{array}{l} \text{I} \quad 2x - 2y + 2z = -2 \\ \text{II} \quad -3x + 6y - 3z = 9 \\ \text{III} \quad -5x + 15y - 10z = 5 \end{array}$$
9. 
$$\begin{array}{l} \text{I} \quad 2x - 2y + 8z = 0 \\ \text{II} \quad 2x + 4y + 4z = 2 \\ \text{III} \quad -6x + 12y - 8z = 7 \end{array}$$
10. 
$$\begin{array}{l} \text{I} \quad 8x + 16y + 24z = 5 \\ \text{II} \quad -16x + 4y + 4z = 0 \\ \text{III} \quad 24x + 48y - 24z = 63 \end{array}$$
11. 
$$\begin{array}{l} \text{I} \quad x_1 + x_2 + x_3 + x_4 = 10 \\ \text{II} \quad 2x_1 + x_2 + 3x_3 + x_4 = 21 \\ \text{III} \quad 3x_1 + 2x_2 + 3x_3 + x_4 = 24 \\ \text{IV} \quad 4x_1 + 3x_2 + x_3 + 2x_4 = 19 \end{array}$$
12. 
$$\begin{array}{l} \text{I} \quad x_1 + x_2 + x_3 + x_4 = 10 \\ \text{II} \quad 2x_1 + x_2 + 3x_3 + x_4 = 19 \\ \text{III} \quad 3x_1 + 2x_2 + 3x_3 + x_4 = 25 \\ \text{IV} \quad 4x_1 + 3x_2 + x_3 + 2x_4 = 29 \end{array}$$