

## Lineare Gleichungssysteme mit vier Unbekannten

$$\begin{aligned} -4a + 1b - 4c + 3d &= -21 \\ 1) \quad 3a - 2b - 2c + 4d &= -5 \\ 3a + 2b + 3c + 4d &= 14 \\ -4a - 4b - 1c + 1d &= -11 \end{aligned}$$

$$1) \quad L = \{(1 / 1 / 3 / -2)\}$$

$$\begin{aligned} 2) \quad 2a + 3b + 3c + 1d &= 14 \\ 1a + 2b + 1c - 1d &= 5 \\ -4a - 2b - 2c - 1d &= 4 \\ 3a - 1b + 3c - 4d &= -6 \end{aligned}$$

$$2) \quad L = \{(-4 / 3 / 3 / 4)\}$$

$$\begin{aligned} 3) \quad -2a + 2b + 1c + 2d &= -3 \\ 4a - 4b + 1c - 2d &= -3 \\ -2a - 4b + 1c + 1d &= -21 \\ -2a - 2b + 1c - 1d &= -13 \end{aligned}$$

$$3) \quad L = \{(3 / 4 / 1 / -3)\}$$

$$\begin{aligned} 4) \quad -1a - 1b + 1c + 1d &= 2 \\ -4a + 1b - 4c - 3d &= 2 \\ 2a + 1b - 2c - 3d &= 4 \\ 3a + 3b - 1c - 1d &= -1 \end{aligned}$$

$$4) \quad L = \{(1 / -2 / -2 / 3)\}$$

$$\begin{aligned} 5) \quad -3a - 4b - 1c + 2d &= 0 \\ 3a + 1b + 1c + 3d &= -4 \\ 3a + 4b - 1c + 2d &= 8 \\ 5a + 4b + 4c + 3d &= -9 \end{aligned}$$

$$5) \quad L = \{(-1 / 2 / -3 / 1)\}$$

$$\begin{aligned} 6) \quad 2a + 3b + 4c - 4d &= -5 \\ 4a + 4b + 1c - 1d &= 13 \\ -2a - 4b + 6c + 1d &= -32 \\ 1a - 4b - 2c - 4d &= -5 \end{aligned}$$

$$6) \quad L = \{(1 / 3 / -3 / 1)\}$$

$$\begin{aligned} 7) \quad -3a + 1b - 2c - 4d &= -22 \\ 2a - 4b + 2c + 1d &= -4 \\ -2a + 2b - 2c + 2d &= -2 \\ -2a + 2b + 2c - 3d &= -6 \end{aligned}$$

$$7) \quad L = \{(5 / 3 / -1 / 3)\}$$

$$\begin{aligned} 8) \quad 3a + 4b + 3c + 1d &= 50 \\ -1a - 1b + 6c + 9d &= 28 \\ -1a + 6b + 4c + 1d &= 65 \\ -1a + 5b + 3c + 2d &= 52 \end{aligned}$$

$$8) \quad L = \{(1 / 7 / 6 / 1)\}$$