

Eingesetzt in (G'_1) :

$$\begin{array}{rcl}
 -5 \cdot (-2) - 16 \cdot (-2) - 8d = 2 & & | \text{ TU} \\
 -8d + 42 = 2 & & | - 42 \\
 -8d = -40 & & | : -8 \\
 d = 5 & &
 \end{array}$$

Eingesetzt in (G_0) :

$$\begin{array}{rcl}
 -3a - 8 \cdot (-2) + 5 \cdot (-2) + \cdot 5 = -4 & & | \text{ TU} \\
 -3a + 11 = -4 & & | - 11 \\
 -3a = -15 & & | : -3 \\
 a = 5 & &
 \end{array}$$

Lösung: $a = 5, b = -2, c = -2, d = 5$

j)

$$\begin{array}{rcccccc}
 & & -2b & & +2d & = 2 & (G_0) \\
 2a & +2b & & +c & & = 1 & (G_1) \\
 -4a & +b & & -2c & -8d & = -1 & (G_2) \\
 -2a & +2b & & +2c & -d & = -2 & (G_3)
 \end{array}$$

Variable a eliminieren:

$$\begin{array}{rcccccc}
 (G_0) : & -2b & & +2d & = 2 & (G'_0) \\
 (G_1) + (G_3) : & 4b & +3c & -d & = -1 & (G'_1) \\
 (G_2) + 2(G_1) : & 5b & & -8d & = 1 & (G'_2)
 \end{array}$$

Variable c eliminieren:

$$\begin{array}{rcccccc}
 (G'_0) : & -2b & +2d & = 2 & (G''_0) \\
 (G'_2) : & 5b & -8d & = 1 & (G''_1)
 \end{array}$$

Variable d eliminieren:

$$4(G''_0) + (G''_1) : \quad -3b \quad = 9 \quad (G'''_0)$$

Aus (G'''_0) folgt: $b = -3$. Eingesetzt in (G''_1) :

$$\begin{array}{rcl}
 -2 \cdot (-3) + 2d = 2 & & | \text{ TU} \\
 2d + 6 = 2 & & | - 6 \\
 2d = -4 & & | : 2 \\
 d = -2 & &
 \end{array}$$

Eingesetzt in (G'_1) :

$$\begin{array}{rcl}
 4 \cdot (-3) + 3c - \cdot (-2) = -1 & & | \text{ TU} \\
 3c - 10 = -1 & & | + 10 \\
 3c = 9 & & | : 3 \\
 c = 3 & &
 \end{array}$$