

Bestimme die Lösungsmenge der Gleichungen durch Äquivalenzumformungen. $G = \mathbb{N}_0$.

$$\begin{aligned} 1. \quad 5x - 33 &= 2x - 9 & || + 33 \\ 5x &= 2x + 24 & || - 2x \\ 3x &= 24 & || : 3 \\ x &= 8 \\ L &= \{8\} \end{aligned}$$

$$\begin{aligned} 2. \quad 35 + 2a &= 185 - 3a & || + 3a \\ 35 + 5a &= 185 & || - 35 \\ 5a &= 150 & || : 5 \\ a &= 30 \\ L &= \{30\} \end{aligned}$$

$$\begin{aligned} 3. \quad 2x + 46 &= 4x + 14 & || - 2x \\ 46 &= 2x + 14 & || - 14 \\ 32 &= 2x & || : 2 \\ 16 &= x \\ L &= \{16\} \end{aligned}$$

$$\begin{aligned} 4. \quad 9x - 20 &= 5x + 12 & || - 5x \\ 4x - 20 &= 12 & || + 20 \\ 4x &= 32 & || : 4 \\ x &= 8 \\ L &= \{8\} \end{aligned}$$

$$\begin{aligned} 5. \quad 9a &= 5a + 8 & || - 5a \\ 4a &= 8 & || : 4 \\ a &= 2 \\ L &= \{2\} \end{aligned}$$

$$\begin{aligned} 6. \quad 6t + 27 &= 3t + 96 & || - 3t \\ 3t + 27 &= 96 & || - 27 \\ 3t &= 69 & || : 3 \\ t &= 23 \\ L &= \{23\} \end{aligned}$$

$$\begin{aligned} 7. \quad 10 + 9x &= 20 + 4x & || - 4x \\ 10 + 5x &= 20 & || - 10 \\ 5x &= 10 & || : 5 \\ x &= 2 \\ L &= \{2\} \end{aligned}$$

$$\begin{aligned} 8. \quad 376 - 5x &= 40 + 3x & || + 5x \\ 376 &= 40 + 8x & || - 40 \\ 336 &= 8x & || : 8 \\ 42 &= x \\ L &= \{42\} \end{aligned}$$

$$\begin{aligned} 9. \quad 4z + 16 &= 6z & || - 4z \\ 16 &= 2z & || : 2 \\ 8 &= z \\ L &= \{8\} \end{aligned}$$

$$\begin{aligned} 10. \quad 16 - 4t &= 72 - 8t & || + 8t \\ 16 + 4t &= 72 & || - 16 \\ 4t &= 56 & || : 4 \\ t &= 14 \\ L &= \{14\} \end{aligned}$$