**LGS mit drei Variablen IV**

**Bestimme x,y und z. Schreibe die Lösungsmenge.**

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| --- | --- |
| I. 5x + 5y + 7z = 30II. 2x + y + z = 10III. x - 4y - 4z = 14**L = { 6; -7; 5}**I. 5x + 5y + 7z = 30 |·2II. 2x + y + z = 10 |·5I. 10x + 10y + 14z = 60II. 10x + 5y + 5z = 50I. – II.IV. 5y + 9z = 10II. 2x + y + z = 10III. x - 4y - 4z = 14 |·2II. 2x + y + z = 10III. 2x - 8y - 8z = 28II. – III.V. 9y + 9z = -18IV. 5y + 9z = 10V. 9y + 9z = -18IV. – V.-4y = 28 |:(-4) **y = -7**in IV. y = -7 einsetzen-35 + 9z = 10 |+35 9z = 45 |:9 **z = 5**in III.x + 28 - 20 = 14 |-8 **x = 6** | I. -3x - 5y + z = -40II. 8x - 5y + 8z = -11III. -3x + 9y + 3z = 60**L = { 2; 7; 1}**I. – II.IV. -11x – 7z = -29II. 8x - 5y + 8z = -11 |·9III. -3x + 9y + 3z = 60 |·5II. 72x - 45y + 72z = -99III. -15x + 45y + 15z = 300II. + III.V. 57x + 87z = 201IV. -11x – 7z = -29 |·87V. 57x + 87z = 201 |·7IV. -957x – 609z = -2523V. 399x + 609z = 1407IV. + V.558x = -1116 |:558 **x = 2**in IV. **x = 2** einsetzen-22 – 7z = -29 |+22 - 7z = -7 |:(-7) **z = 1**in I.-6 - 5y + 1 = -40 |+5 -5y = -35 |:(-5) **y = 7** |