**LGS mit drei Variablen I**

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

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| --- | --- |
| I. 7x + 9y + 7z = 40II. 3x + 7y + 7z = 26III. -2x - 2y - 3z = -15I. – II. IV. 4x + 2y = 14I. 7x + 9y + 7z = 40 |·3III. 3x + 7y + 7z = 26 |·(-7)I. 21x + 27y + 21z = 120III. 14x + 14y + 21z = 105I. – III. V. 7x + 13y = 15IV. 4x + 2y = 14 |·7V. 7x + 13y = 15 |·4IV. 28x + 14y = 98V. 28x + 52y = 60IV. – V. -38y = 38 |:(-38) **y = -1**in IV: 4x – 2 = 14 |+2 4x = 16 |:4 x = 4in I: 28 – 9 – 7z = 40 |-19 7z = 21 |:7 **z = 3****L = {4; -1; 3}** | I. 7x + 9y + 9z = 46II. 2x + 4y + 9z = 6III. 7x + 4y - 8z = 60I. – II. IV. 5x + 5y = 40I. 7x + 9y + 9z = 46 |·8III. 7x + 4y - 8z = 60 |·9I. 56x + 72y + 72z = 368III. 63x + 36y - 72z = 540I. + III. V. 118x + 108y = 908IV. 5x + 5y = 40 |:5V. 119x + 108y = 908IV. x + y = 8 | -y x = 8 – yEinsetzungsverfahren: IV in V119·(8 – y) + 108y = 908 |T 952 – 119y + 108y = 908 |T 952 – 11y = 908 |-952 -10y = - 44 |:(-10) **y = 4**in IV: **x = 8 – 4 = 4**in I: 28 + 36 + 9z = 46 |-64 9z = -18 |:(-2) **z = -2****L = {4; 4; -2}** |