**LGS mit drei Variablen III**

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

|  |  |
| --- | --- |
| I. 9x + 4y - 6z = 9  II. 5x - 2y + 7z = -64  III. -5x + y - 4z = 46  L = { -5; 9; -3}  II. + III.  IV. -y + 3z = -18  ⬄ y = 18 + 3z  I. 9x + 4y - 6z = 9 |·5  III. -5x + y - 4z = 46 |·9  I. 45x + 20y – 30z = 45  III. -45x + 9y – 36z = 414  I. + III.  V. 29y – 66z = 459  IV. in V.  29(18 + 3z) – 66z = 459  522 + 87z – 66z = 459 |-522  21z = -63 |:21  **z = -3**  in IV z = -3  **y = 18 – 9 = 9**  in I.  9x + 36 + 18 = 9 |T  9x + 54 = 9 |-54  9x = -45 |:9  **x = -5** | I. -8x - y - 4z = -56  II. 4x + 7y - 9z = 124  III. x - y - 8z = 32  L = { 8; 8; -4}  I. – III.  IV. -9x + 4z = -88  II. 4x + 7y - 9z = 124  III. x - y - 8z = 32 |·7  II. 4x + 7y - 9z = 124  III. 7x - 7y - 56z = 224  V. 11x – 65z = 348  IV. -9x + 4z = -88 |·11  V. 11x – 65z = 348 |·9  IV. -99x + 44z = -968  V. 99x – 585z = 3132  IV. + V.  -541z = 2164 |:(-541)  z = -4  in IV. z = -4 einsetzen  -9x - 16 = -88 |+16  -9x = -72 |:(-9)  **x = 8**  in III.  8 – y + 32 = 32 |-40  -y = -8 |·(-1)  **y = 8** |