Lösungen zu LGS 1

a) $3x + 5y = 41$
$2x + y = 18 | \cdot (-5)$

$AV => L = \{(7;4)\}$

b) $6x - 5y = -4$
$2x + y = 4 | \cdot 5$

$AV => L = \{(1;2)\}$

c) $x + \dfrac{1}{3}y = 4 | \cdot 3$
$\dfrac{3}{5}x - \dfrac{2}{3}y = 5 | \cdot 15$

$3x + y = 12 | \cdot 10$
$9x - 10y = 75$

$AV => L = \{(5;-3)\}$

d) $0{,}3x + 0{,}9y = 1{,}2 | \cdot 10$
$4x + 4y = 8$

$3x + 9y = 12 | \cdot 4$
$4x + 4y = 8 | \cdot (-3)$

$AV => L = \{(1;1)\}$

e) $5x + 7y = -1 | \cdot 3$
$3x + 2y = -5 | \cdot (-5)$

$AV => L = \{(-3;2)\}$

f) $2x - 6y = -4$
$2x - 4y = 2 | \cdot (-1)$

$AV => L = \{(7;3)\}$

g) $8x - y = 15 | \cdot (-9)$
$12x - 9y = 15$

$AV => L = \{(2;1)\}$

h) $3x + 5y - z = 7$
$2x - 3y + 2z = -6$
$7x + 8y + z = 3$

$I + III => IV\ 10x + 13y = 10$ und $I \cdot 2 + II => V\ 8x + 7y = 8$

$IV \cdot 4 + V \cdot (-5) => L = \{(1;0;-4)\}$

i) $4x - 2y + 3z = 8$
$x - 5y - z = 12$
$x + 2z = 3$

$I \cdot 5 + II \cdot (-2) => IV\ 18x + 17z = 16$

$III \cdot (-18) + IV => L = \{(-1;-3;2)\}$

j) $x - 2y = -2$
$3x - 2z = 4$
$2y + z = -4$

$I + III => IV\ x + z = -6$

$II + IV \cdot 2 => L = \{(-1{,}6;0{,}2;-4{,}4)\}$