

BS 6612b-d

b) I $y = 3x - 15$

$I = II$

$3x - 15 = -0,5x + 13 \quad | +0,5x$

$\wedge II \quad y = -0,5x + 13$

$3,5x - 15 = 13 \quad | +15$

$3,5x = 28 \quad | :3,5$

$x = 8$

$x \text{ in I} \quad y = 3 \cdot 8 - 15$

$y = 9$

$L = \{(8|9)\}$

c) I $y = 1,5x - 20$

II

$y + x = 5 \quad | -x$

$\wedge II \quad y + x = 5$

$y = -x + 5$

$I = II$

$1,5x - 20 = -x + 5 \quad | +x$

$2,5x - 20 = 5 \quad | +20$

$2,5x = 25 \quad | :2,5$

$x = 10$

$x \text{ in I} \quad y = 1,5 \cdot 10 - 20$

$= 15 - 20$

$= -5$

$L = \{(10|-5)\}$

d) I $x = -1,5y$

$I = II$

$-1,5y = -3y - 18 \quad | +3y$

$\wedge II \quad x = -3y - 18$

$1,5y = -18 \quad | :1,5$

$y = -12$

$y \text{ in I} \quad x = -1,5 \cdot (-12)$

$x = 18$

$L = \{(18|-12)\}$

BS. 6714b-d

$$b) \text{ I } 7y - 11x = 30$$

$$\wedge \text{ II } 10x - 7y = -33$$

$$\text{zu I } 7y - 11x = 30 \quad | +11x$$

$$7y = 11x + 30 \quad | :7$$

$$y = 1\frac{4}{7}x + 4\frac{2}{7}$$

$$\text{zu II } 10x - 7y = -33 \quad | -10x$$

$$-7y = -10x - 33 \quad | :(-7)$$

$$y = 1\frac{3}{7}x + 4\frac{5}{7}$$

$$\text{I} = \text{II} \quad 1\frac{4}{7}x + 4\frac{2}{7} = 1\frac{3}{7}x + 4\frac{5}{7} \quad | -1\frac{3}{7}x$$

$$\frac{1}{7}x + 4\frac{2}{7} = 4\frac{5}{7} \quad | -4\frac{2}{7}$$

$$\frac{1}{7}x = \frac{3}{7} \quad | \cdot \frac{1}{7}$$

$$x = 3$$

$$x \text{ in II } y = 1\frac{3}{7} \cdot 3 + 4\frac{5}{7}$$

$$y = 9$$

$$L = \{(3|9)\}$$

$$\text{Probe: I } 7 \cdot 9 - 11 \cdot 3 = 63 - 33 = 30 \quad \checkmark$$

$$\text{II } 10 \cdot 3 - 7 \cdot 9 = 30 - 63 = -33 \quad \checkmark$$

$$c) \text{ I } 5x + 11y = 46$$

$$\wedge \text{ II } 11y - 26 = -10x$$

$$\text{zu I } 5x + 11y = 46 \quad | -11y$$

$$5x = -11y + 46 \quad | :5$$

$$x = -2\frac{1}{5}y + 9\frac{1}{5}$$

$$\text{zu II } 11y - 26 = -10x \quad | :(-10)$$

$$x = -1\frac{1}{10}y + 2\frac{3}{5}$$

$$\text{I} = \text{II} \quad -2\frac{1}{5}y + 9\frac{1}{5} = -1\frac{1}{10}y + 2\frac{3}{5} \quad | +1\frac{1}{10}y$$

$$-1\frac{1}{10}y + 9\frac{1}{5} = 2\frac{3}{5} \quad | -9\frac{1}{5}$$

$$-1\frac{1}{10}y = -6\frac{3}{5} \quad | :(-1\frac{1}{10})$$

$$y = 6$$

$$y \text{ in I} \quad x = -2 \frac{1}{5} \cdot 6 + 9 \frac{1}{5}$$

$$x = -4$$

$$L = \{(-4|6)\}$$

Probe: $5 \cdot (-4) + 11 \cdot 6 = -20 + 66 = 46 \checkmark$

$$11 \cdot 6 - 26 = -10 \cdot (-4)$$

$$66 - 26 = 40$$

$$40 = 40 \checkmark$$

d) I $4x - 6y = -72$

II $6y + 5x = 18$

zu I $4x - 6y = -72 \quad | -4x$

$$-6y = -4x - 72 \quad | :(-6)$$

$$y = \frac{2}{3}x + 12$$

zu II $6y + 5x = 18 \quad | -5x$

$$6y = -5x + 18 \quad | :6$$

$$y = -\frac{5}{6}x + 3$$

I=II $\frac{2}{3}x + 12 = -\frac{5}{6}x + 3 \quad | +\frac{5}{6}x$

$$1\frac{1}{2}x + 12 = 3 \quad | -12$$

$$1\frac{1}{2}x = -9 \quad | :1\frac{1}{2}$$

$$x = -6$$

$$L = \{(-6|8)\}$$

x in II $y = -\frac{5}{6}x + 3$

$$= 8$$

Probe $4 \cdot (-6) - 6 \cdot 8 = -24 - 48 = -72 \checkmark$

$$6 \cdot 8 + 5 \cdot (-6) = 48 - 30 = 18 \checkmark$$

BS. 6716

$$a) \text{ I } y = -0,75x + 9$$

$$\text{II } \frac{1}{5}y = \frac{1}{3}x - \frac{2}{15}$$

$$\text{zu II } \frac{1}{5}y = \frac{1}{3}x - \frac{2}{15} \quad | \cdot 5$$

$$y = \frac{5}{3}x - \frac{2}{3}$$

$$\text{I} = \text{II} \quad -0,75x + 9 = \frac{5}{3}x - \frac{2}{3} \quad | +0,75x$$

$$9 = \frac{5}{2}x - \frac{2}{3} \quad | + \frac{2}{3}$$

$$9 \frac{2}{3} = \frac{5}{2}x \quad | : \frac{5}{2}$$

$$4 = x$$

x in I

$$y = -0,75 \cdot 4 + 9 \\ = 6$$

$$L = \{(4|6)\}$$