

Lösungen:

Aufgabe 1

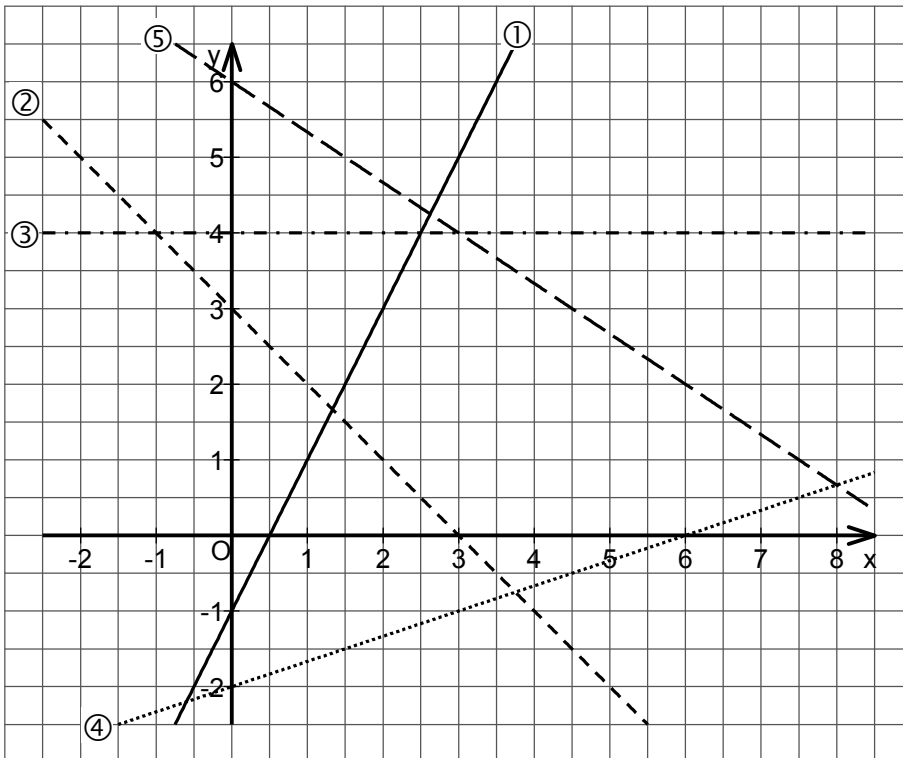
a) $f_1(x) = 2x - 1$

b) $f_2(x) = -x + 3$

c) $f_3(x) = 4$

d) $f_4(x) = \frac{1}{3}x - 2$

e) $f_5(x) = -\frac{2}{3}x + 6$



Schnittpunkte und $f(x) > 0$

- | | | |
|------------------|-----------------------|--------------------------------|
| a) $S_Y(0 -1)$ | $N(-\frac{1}{2} 0)$ | $L =] -\frac{1}{2}; \infty [$ |
| b) $S_Y(0 3)$ | $N(3 0)$ | $L =] -\infty; 3 [$ |
| c) $S_Y(0 4)$ | ---- | $L = \mathbb{R}$ |
| d) $S_Y(0 -2)$ | $N(6 0)$ | $L =] 6; \infty [$ |
| e) $S_Y(0 6)$ | $N(9 0)$ | $L =] -6; \infty [$ |

• $f_1(x) < f_3(x) : 2x - 1 < 4 \Leftrightarrow 2x < 5 \Leftrightarrow x < 2,5$

$L =] -\infty; 2,5 [$

• $f_5(x) > f_3(x) : -\frac{2}{3}x + 6 > 4 \Leftrightarrow -\frac{2}{3}x > -2 \Leftrightarrow x < 3$

$L =] -\infty; 3 [$

• $f_2(x) \leq f_4(x) : -x + 3 \leq \frac{1}{3}x - 2 \Leftrightarrow -\frac{4}{3}x \leq -5 \Leftrightarrow x \geq \frac{15}{4}$

$L = [\frac{15}{4}; \infty [= [3,75; \infty [$

• $f_5(x) \geq f_4(x) : -\frac{2}{3}x + 6 \geq \frac{1}{3}x - 2 \Leftrightarrow -x \geq -8 \Leftrightarrow x \leq +8$

$L =] -\infty; 8]$