

DB

$$Ab = p - k_v$$

$$Ab_1 = 110 \text{ €/Stk} - 30 \text{ €/Stk} = 80 \text{ €/Stk}$$

$$Ab_2 = 90 \text{ €/Stk} - 30 \text{ €/Stk} = 60 \text{ €/Stk}$$

Lineares Gleichungssystem

$$z = 80x_1 + 60x_2 \rightarrow \max!$$

Maschine A

$$2x_1 + 4x_2 \leq 180$$

Maschine B

$$3x_1 + 2x_2 \leq 210$$

Absatz

$$x_2 \leq 35$$

$$z = 80x_1 + 60x_2 \rightarrow \max !$$

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$$2x_1 + 4x_2 \leq 180$$

$$3x_1 + 2x_2 \leq 210$$

$$x_2 \leq 35$$

$$x_1, x_2 \geq 0$$

$$2x_1 + 4x_2 \leq 180$$

$$x_2 = 0 : 2x_1 = 180 \quad / : 2$$
$$x_1 = 90$$

$$x_1 = 0 : 4x_2 = 180 \quad / : 4$$
$$x_2 = 45$$

$$3x_1 + 2x_2 \leq 210$$

$$x_2 = 0 : 3x_1 = 210 \quad | :3$$

$$x_1 = 70$$

$$x_1 = 0 : 2x_2 = 210 \quad | :2$$

$$x_2 = 105$$

$$x_2 \leq 35$$

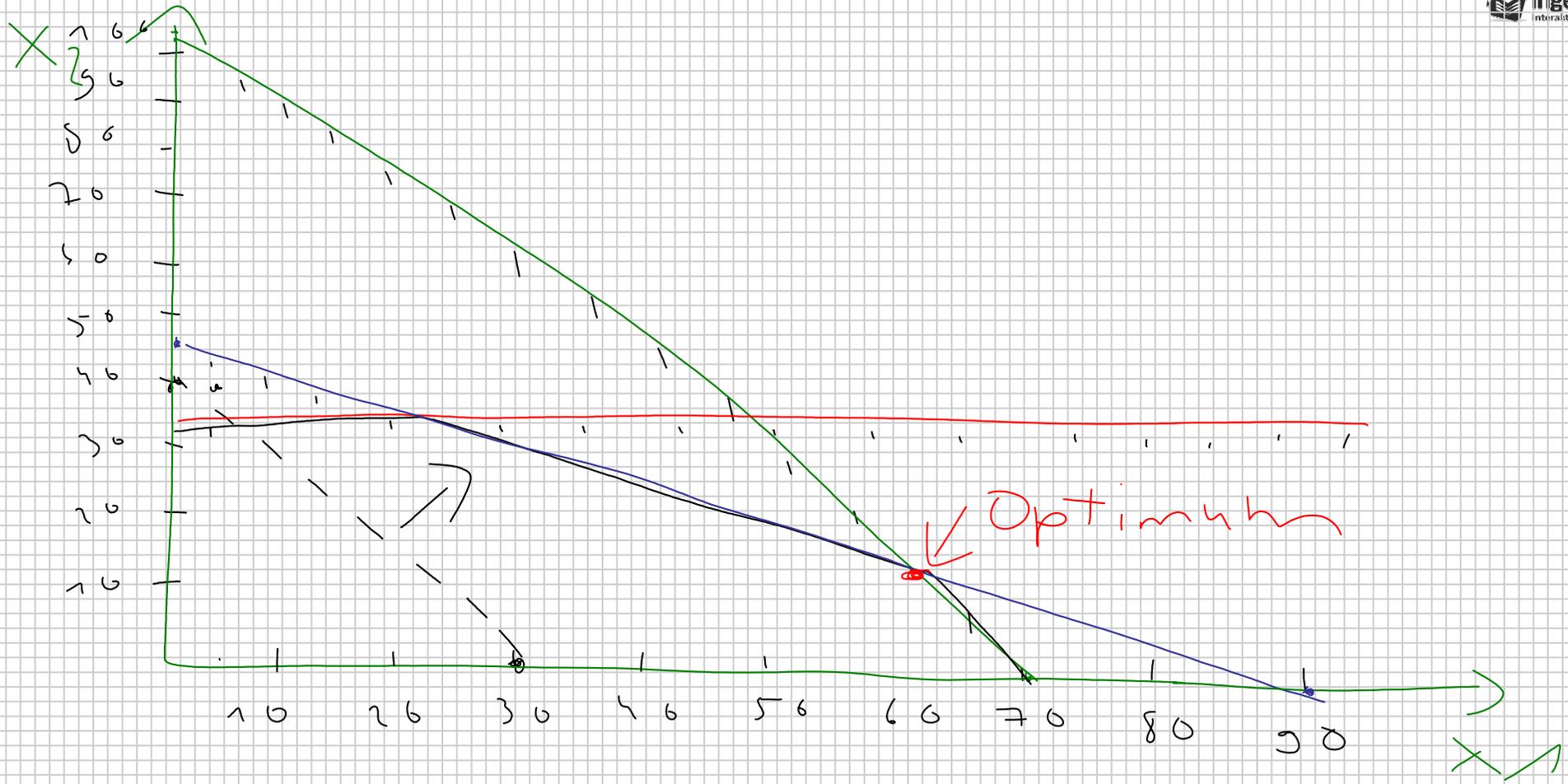
Zielfunktion

$$z = 80x_1 + 60x_2$$

$$80x_1 + 60x_2 = 2.400$$

$$x_1 = 0 : 60x_2 = 2.400 \rightarrow x_2 = 40$$

$$x_2 = 0 : 80x_1 = 2.400 \rightarrow x_1 = 30$$



$$x_1 = 60$$

$$x_2 = 15$$

$$A: 2 \cdot 60 + 4 \cdot 15 = 180 \leq 180 \quad \checkmark$$

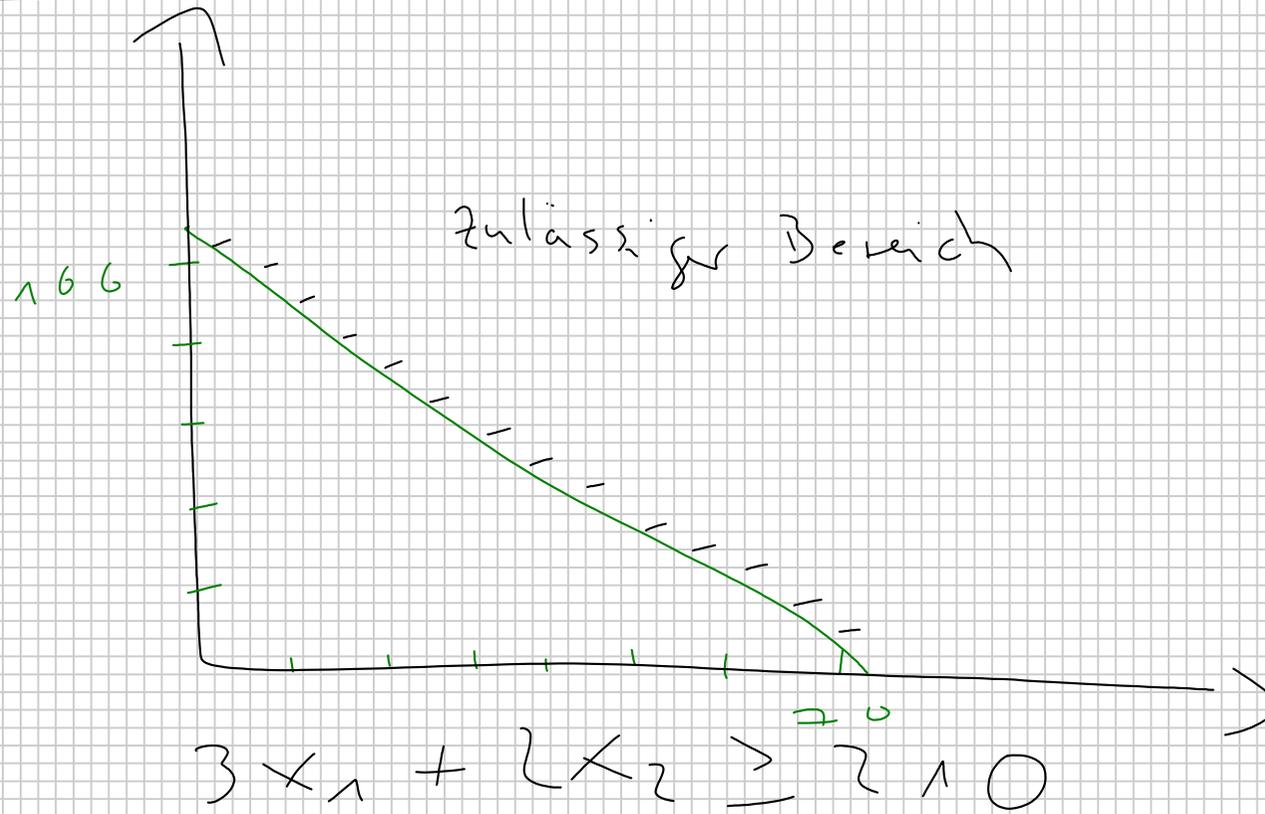
$$B: 3 \cdot 60 + 2 \cdot 15 = 210 \leq 210 \quad \checkmark$$

$$\text{Absatz: } 15 \leq 35 \quad \checkmark$$

$$x_1 = 60 \quad x_2 = 15$$

$$DB = 80 \cdot 60 + 60 \cdot 15 = 5700 \text{ €}$$

Exkurs:



$$x_1 = 0 : 2x_2 \geq 2 \wedge 0 \quad | : 2$$

$$x_2 \geq 1 \wedge 0$$

$$x_2 = 0 : x_1 \geq 2 \wedge 0$$

$$x_1 \geq 2 \wedge 0$$

