

2. SA - Mathe M. Kl. Musterlös

1. $t=3, P(-2/4)$

$$4 = m \cdot (-2) + 3 \Rightarrow m = -\frac{1}{2} \Rightarrow y = -\frac{1}{2}x + 3$$

(3 BE)

2. $g(x) = -\frac{1}{2}x + 3; h(x) = 2,5x$

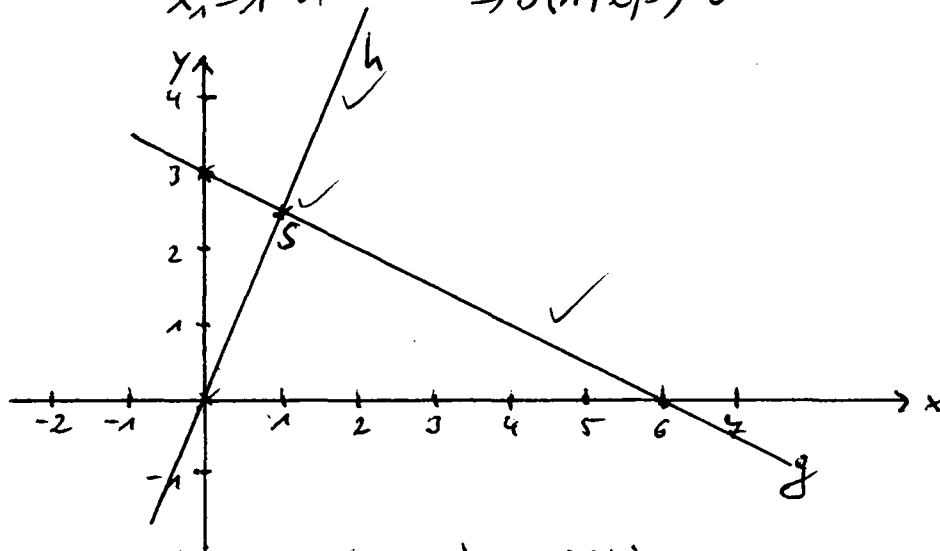
2.1 $-\frac{1}{2}x + 3 = 0 \checkmark \quad t=3 \checkmark \text{ für } x=0 \Rightarrow y=3 \checkmark$
 $x_1 = 6 \checkmark$

(2 BE)

2.2 $-\frac{1}{2}x + 3 = 2,5x \checkmark \quad h(1) = 2,5 \checkmark$
 $x_1 = 1 \checkmark \Rightarrow S(1/2,5) \checkmark$

(3 BE)

2.3



(3 BE)

2.4 Abstand von $S(1/2,5), N(6/0)$

$$d = \sqrt{2,5^2 + (6-1)^2} = 5,59 \text{ cm} \checkmark$$

(3 BE)

3.1 I $a + 3b = 6 \Rightarrow a = 0 \checkmark$
 II $-2a - 1,5b = -3 \Rightarrow L = \{(0/2)\}$
 $2I + II \checkmark \quad 4,5b = 9 \Rightarrow b = 2 \checkmark$

(4 BE)

3.2 I $x - 2y = 5$
 II $-1,5x + 3y = -5$
 $1,5I + II \quad 0 = 2,5 \text{ f.A.} \Rightarrow L = \{\} \checkmark$

(3 BE)

4. $\frac{2(4+x)}{2(2x-1)} - \frac{x+6}{2x+1} = \frac{4x}{2(4x^2-1)} \quad D = \mathbb{R} \setminus \{-\frac{1}{2}, \frac{1}{2}\}, N: (4x^2-1)$
 $(4+x)(2x+1) - (x+6)(2x-1) = 2x$
 $8x+4+2x^2+x-2x^2+x-12x+6=2x$
 $4x=10 \Rightarrow x = \frac{5}{2} \Rightarrow L = \{\frac{5}{2}\}$

(6 BE)

5.1 $P_1(16000/6), P_2(24000/5)$

$$m = -\frac{1}{8000}; 6 = -\frac{1}{8000} \cdot 16000 + t \Rightarrow t = 8 \Rightarrow y = -\frac{1}{8000}x + 8$$

(3 BE)

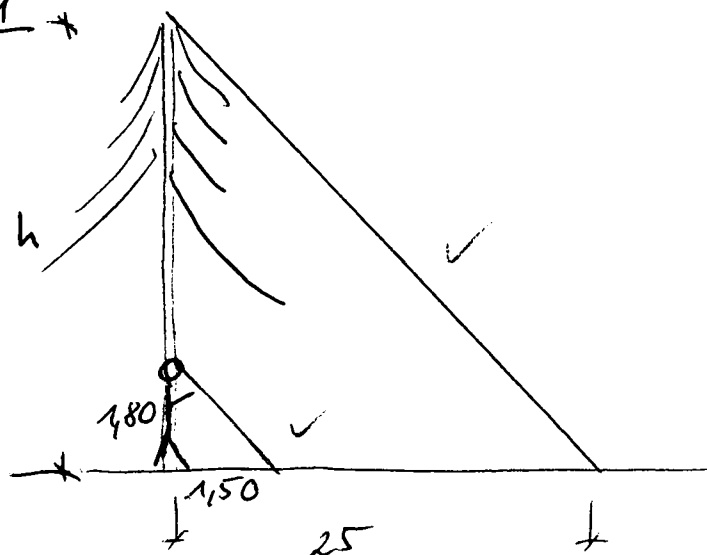
5.2 $1 = -\frac{1}{8000}x + 8 \Rightarrow x = 56000 \text{ km} \checkmark$

(2 BE)

5.3 $y = -\frac{1}{8000} \cdot 10000 + 8 = 6,75 \text{ mm} \checkmark$
 $\Rightarrow 8 \text{ mm} - 6,75 \text{ mm} = 1,25 \text{ mm} \checkmark$

(3 BE)

6.1 *



(28E)

6.2

$$\frac{h}{25} = \frac{1,80}{1,50} \quad \checkmark \quad \checkmark$$

$$h = \frac{1,80}{1,50} \cdot 25 = 30m \quad \checkmark$$

(38E)

40