

## Aufgabe 2 (Lot, ..)

$$1) m_f = \frac{-5}{8} ; t_f = 5 ; f(x) = \underline{\underline{-\frac{5}{8}x + 5}}$$

$$2) A_2 = \frac{1}{2} \cdot 8 \cdot 5 = \underline{\underline{20 \text{ [FE]}}}$$

$$3) \underline{\underline{d = \frac{40\sqrt{89}}{89}}}$$

$$4) y = -\frac{5}{8}x + 5 \Leftrightarrow x = \frac{8}{5}y + 8 \Rightarrow \underline{\underline{f^{-1}(x) = -\frac{8}{5}x + 8}}$$

$$f^{-1}(x) > f(x) \Leftrightarrow -\frac{8}{5}x + 8 > -\frac{5}{8}x + 5 \Leftrightarrow x < \frac{40}{13} (\approx 3,08)$$

$$\text{Bereich} = \underline{\underline{]-\infty; \frac{40}{13}[}}$$

$$5) \text{Sgf}(0|5) \Rightarrow t_g = 5 ; m_t = 1 \Rightarrow g(x) = x + 5$$

$$g(x) < 8 \Leftrightarrow x + 5 < 8 \Leftrightarrow x < 3, \text{ also } \underline{\underline{B = ]-\infty; 3[}}$$

$$6) m_e \cdot m_f = -1 \Leftrightarrow m_e = \frac{8}{5} ; t_e = y_p - m x_p = 6 - \frac{8}{5}(-5) = 14$$

$$\underline{\underline{e(x) = \frac{8}{5}x + 14}}$$

$$7) e(x) = f(x) \Leftrightarrow \frac{8}{5}x + 14 = -\frac{5}{8}x + 5 \Leftrightarrow x_s = \frac{360}{89} ; y_s = \frac{670}{89}$$

$$\underline{\underline{d = \frac{17\sqrt{89}}{89} \approx 1,80}}$$