

$$= -2e^x \cdot \frac{(1+e^x) - 2e^x}{(1+e^x)^3}$$

$$= -2e^x \cdot \frac{(1-e^x)}{(1+e^x)^3}$$

$$= \frac{2e^x(-1+e^x)}{(1+e^x)^3}$$

n.B. $f'(x) = 0$

$$0 = \frac{-2e^x}{(1+e^x)^2}$$

$$0 = -2e^x$$

$$0 \neq e^x$$

\Rightarrow keine Extrempunkte

e) ~~*)~~ n.B. $f''(x) = 0$

$$0 = \frac{2e^x(-1+e^x)}{(1+e^x)^3}$$

$$0 = 2e^x(-1+e^x)$$

$$2e^x = 0$$

$$-1+e^x = 0$$

$$e^x \neq 0 \quad \downarrow$$

$$e^x = 1$$

$$x = 0$$

n.B. VZw

$$f''(-1) = \frac{2e^{-1}(-1+e^{-1})}{(1+e^{-1})^3} = \frac{+ \cdot (-)}{+} = -$$

$$f''(1) = \frac{2e(1+e)}{(1+e)^3} = \frac{+ \cdot (+)}{+} = +$$

} VZw!

$$f(0) = \frac{2}{1+e^0} = 1$$

$w(0|1)$

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d) ~~$1+e^x = 0$~~

~~$e^x = -1$~~

~~$x = \dots$~~