

S 220 Nr. 9

$$f(x) = ax^4 + bx^3 + cx^2 + dx + e$$

$$f'(x) = 4ax^3 + 3bx^2 + 2cx + d$$

$$f''(x) = 12ax^2 + 6bx + 2c$$

$$T = P(-4|6) \quad f(-4) = a(-4)^4 + b(-4)^3 + c(-4)^2 + d(-4) + e = 6$$

$$f'(-4) = 4a(-4)^3 + 3b(-4)^2 + 2c(-4) + d = 0$$

$$W = Q(4|2) \quad f(4) = a \cdot 4^4 + b \cdot 4^3 + c \cdot 4^2 + d \cdot 4 + e = 2$$

$$\text{mit waag. Tang.} \quad f'(4) = 4 \cdot a \cdot 4^3 + 3b \cdot 4^2 + 2c \cdot 4 + d = 0$$

$$\text{notw. Bed. Vedep.} \quad f''(4) = 12a \cdot 4^2 + 6b \cdot 4 + 2c = 0$$

$$\left(\begin{array}{ccccc|c} 256 & -64 & 16 & -4 & 1 & 6 \\ -256 & 48 & -8 & 1 & 0 & 0 \\ 256 & 64 & 16 & 4 & 1 & 2 \\ 256 & 48 & 8 & 1 & 0 & 0 \\ 192 & 24 & 2 & 0 & 0 & 0 \end{array} \right) \Rightarrow \text{mit GTR}$$

$$\left(\begin{array}{ccccc|c} 1 & 0 & 0 & 0 & 0 & -\frac{3}{1024} \\ 0 & 1 & 0 & 0 & 0 & \frac{1}{64} \\ 0 & 0 & 1 & 0 & 0 & \frac{3}{32} \\ 0 & 0 & 0 & 1 & 0 & -\frac{3}{4} \\ 0 & 0 & 0 & 0 & 1 & \frac{13}{4} \end{array} \right)$$

$$f(x) = -\frac{3}{1024} \cdot x^4 + \frac{1}{64} x^3 + \frac{3}{32} x^2 - \frac{3}{4} x + \frac{13}{4}$$