3.Fall

$\lambda_{1,3,4} = 0$

~~(scribbled out)~~

$2(x_1 - 1,5) + \lambda_2 = 0 \iff \lambda_2 = -2x_1 + 3$

$4(x_2 - 1)^3 - \lambda_2 = 0$

$\lambda_2(-1 + x_1 - x_2) = 0$

$x_2 = -1 + x_1$

$4(-2 + x_1)^3 - \lambda_2$

$4x_1^3 - 24x_1^2 + 116x_1 - 28 = 0$

$x_1 = 2.884846177.1183$

$x_2 = 1.884846177.1183$

$\lambda_2 = -2 \cdot x_1 + 3 \approx -2,769\ldots \quad \frac{\not}{} \text{(negativ)}$
$\qquad\qquad\qquad\qquad\qquad\qquad \lambda \geqslant 0$

4.Fall

$\lambda_{1,2,4} = 0$

$2(x_1 - 1,3) - \lambda_3 \iff \lambda_3 = 2x_1 - 3 \approx -1,543835\ldots$

$4(x_2 - 1)^3 + \lambda_3$

$\lambda_3(-1 - x_1 + x_2) = 0$

$x_2 = +1 + x_1$

$4x_1^3 + 8x_1 - 3 = 0$

$x_1 = 0,728082\ldots$

$x_2 = 1,728082123\ldots$

$\nabla_x L(t, \lambda) \neq 0$ für $\uparrow$