

## Zero Cross Point

Compute the zero cross point (Nullstelle) of the following function using the method of polynomial division with  $x+3$ :

$$f(x) = x^5 + 3x^4 - 3x^3 - 9x^2 + x + 3$$

## Local Optima

Use the Newton Method to compute all local optima (Positions in  $x$ ) for the following function.

$$f(x) = x^4 + 6x^3 + 3x^2 - 10x$$