

Übungen zu **Numerik (für Geowissenschaftler)**  
Blatt 6

**Ü1** (*Splines*) Derive the necessary conditions to define quadratic spline functions, analogous to the linear and cubic spline.

**Ü2** (*Interpolation*) Given are the measurements  $(t_i, q_i), i = 0, 1, 2$ :

$t_i$	0	1	2
$q_i$	-1	0	1 or 0

- Using the method of Lagrange calculate the *quadratic* polynomial  $q(t) = a + bt + ct^2$  which interpolates the measurements.
- Find the (two) cubic spline-function(s) to visualize the measurements as a smooth curve. Plot it!