G. Farin

Homework Assignment #3

due: 4-17

1. Let a quadratic B-spline curve be given by control points

$$\begin{bmatrix}0\\0\end{bmatrix}\ \begin{bmatrix}2\\0\end{bmatrix}\ \begin{bmatrix}2\\2\end{bmatrix}\ \begin{bmatrix}4\\3\end{bmatrix}\ \begin{bmatrix}5\\2\end{bmatrix}$$

and the knot sequence $0, 0, 1, 2, 3, 3$. Degree elevate to $n = 3$.

2. Degree reduce(approximately) the above curve to a piecewise linear B-spline curve. Sketch your result and explain your approach.

No handwritten writeups please!