

G. Farin

Programming Assignment # 1*due: 9-18*

Let a Bézier curve be given by control points

$$\left[\frac{i}{10n} \left(1 - \frac{i}{n} \right) \right], i = 0, \dots, n.$$

1. Plot the polygon as well as the curve. Use different linewidths for polygon and curve. Mark control vertices by hollow circles. This will be your first plot.

2. For the second plot, execute the following loop:

for i=0, 50 do

1. translate the polygon by [0.02, 0.03].
2. Change each control point by a random vector whose length is bounded by 0.05.
3. Plot the resulting curve (not the polygon).

Do the above for $n = 5, 10, 50$.