

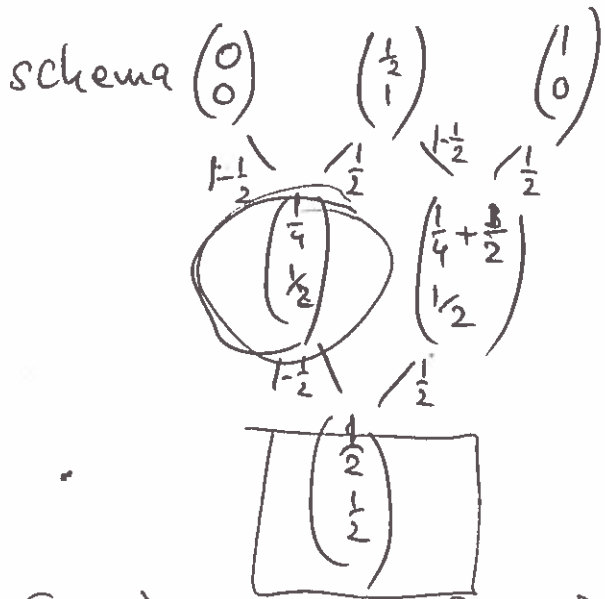
$$y(t) = \binom{0}{0} B_0^2(t) + \binom{1/2}{1} B_1^2(t) + \binom{1}{0} B_2^2(t)$$

$\begin{matrix} \text{C}_0 & & & \\ & \parallel & & \\ & (1-t)^2 & & 2(1-t)t & & t^2 \\ & & & & & \parallel \\ & & & & & t^2 \end{matrix}$

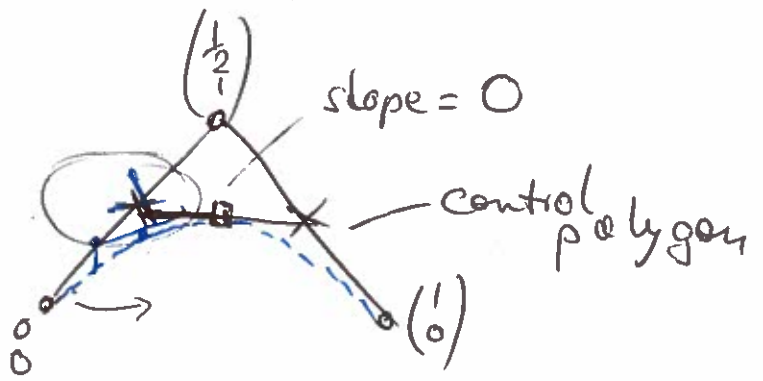
$$\binom{n!}{(n-i)!i!} (1-t)^{n-i} t^i$$

$$\begin{pmatrix} x \\ y \end{pmatrix} \left(\frac{1}{2} \right) = \binom{1/2}{1} 2(1-\frac{1}{2})(\frac{1}{2}) + \binom{1}{0} (\frac{1}{2})^2$$

$$= \frac{1}{2} \binom{1/2}{1} + \binom{1/4}{0} = \binom{1/2}{1/2}$$



geometrically



$$\begin{pmatrix} 1 \\ 1 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix} \left(\frac{1}{2} \right) = \frac{2}{4} \left[\left[\begin{pmatrix} 1/2 \\ 1 \end{pmatrix} - \begin{pmatrix} 0 \\ 0 \end{pmatrix} \right] B_0^1(t) + \left[\begin{pmatrix} 1 \\ 0 \end{pmatrix} - \begin{pmatrix} 1/2 \\ 1 \end{pmatrix} \right] B_1^1(t) \right] \left(\frac{1}{2} \right) = t$$

$$= 2 \cdot \left[\begin{pmatrix} 1/2 \\ 1 \end{pmatrix} \dots \sim \begin{pmatrix} 1/2 \\ -1 \end{pmatrix} \dots \right] \left(\frac{1}{2} \right) = t$$

$$= \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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