



$$C^1 \quad 4(C_4^1 - C_3^1) = 4(C_1^2 - C_0^2) \quad \begin{array}{l} \text{tangent of curve 1 at end} \\ = \text{tangent of curve 2 at start} \end{array}$$

$C^2 \dots$

↙ barycentric coord's

$$\sum \alpha_i = 1 \quad \alpha_i \geq 0 \quad \begin{array}{l} \text{with domain of interest} \\ = \text{convex hull of vertices} \end{array}$$

$$\underbrace{\sum \alpha_i C_i}_{\text{barycentric combination weighted sum}} \quad \begin{array}{l} \text{apply affine} \\ \text{map} \end{array} \quad \underbrace{A}_{2 \times 2} \underbrace{(\sum \alpha_i C_i)}_{2 \times 1} + \underbrace{\mathbb{1}}_{2 \times 1}$$

$$= \sum \alpha_i A C_i + \sum \alpha_i \mathbb{1}$$

$$\underline{\underline{\sum \alpha_i (A C_i + \mathbb{1})}} \quad \text{"invariant"}$$

$$\sum_{i=0}^n B_i^n = \sum_{i=0}^n \binom{n}{i} (1-t)^{n-i} t^i \quad (s+t)^2 = \binom{2}{0}s^2 + \binom{2}{1}st + t^2$$

$$1 = \underbrace{(1-t)}_s + t)^n = (s+t)^n = \sum \binom{n}{i} s^{n-i} t^i$$

$$\underline{\underline{B_2^2(t) = t^2}} \quad \text{can not be written as } \gamma_1 \underline{\underline{B_1^2(t)}} + \gamma_0 \underline{\underline{B_0^2(t)}}$$