Curvature

The curvatures κ at the endpoints of a Bézier curve, parametrized by

$$p = \sum_{k=0}^{n} c_k \, b_k^n \,,$$

have the following geometric interpretation. If $p'(0) \neq 0 \neq p'(1)$,

$$\kappa(0) = \frac{2(n-1)}{n} \, \frac{\text{area}[c_0, c_1, c_2]}{|c_1 - c_0|^3}, \quad \kappa(1) = \frac{2(n-1)}{n} \, \frac{\text{area}[c_n, c_{n-1}, c_{n-2}]}{|c_{n-1} - c_n|^3},$$

where $[a_0, a_1, a_2]$ denotes the triangle formed by the points a_k and $|v|$ is the length of a vector v.