

Definition 0.0.1. [2G6] By polygonal curve $\varphi : [0, 1] \rightarrow \mathbb{R}^2$ we will mean: a not self-intersecting (that is, injective) polygonal (that is, piecewise linear) curve in the plane. Analytically, there are points V_0, V_1, \dots, V_n (called “vertices”) in the plane, and $0 = t_0 < t_1 \dots < t_n = 1$ such that

$$\varphi(t) = \frac{t - t_i}{t_{i+1} - t_i} V_{i+1} + \frac{t_{i+1} - t}{t_{i+1} - t_i} V_i \text{ when } t_i \leq t \leq t_{i+1} .$$

The polygonal curve is closed if $\varphi(0) = \varphi(1)$. (In this case we require that φ is injective when restricted to $[0, 1)$).