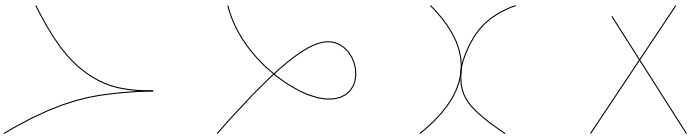
Comprehension questions

PROBLEM 22.1. *Out of the pictures below, which ones must be singular curves?*



(i) (ii) (iii) (iv)

PROBLEM 22.2. *Take a curve $C = \{p(x) = y^2\}$, where p is a polynomial of degree d, and assume that the equation $p(x) = y^2$ is nonsingular. Let's say our curve has a ovals and b unbounded components. Depending on d, what pairs (a, b) are possible, and why?*

18.900 Geometry and Topology in the Plane

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