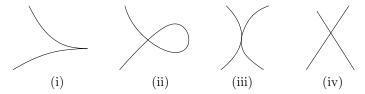
## VI. ALGEBRAIC CURVES

## **Comprehension** questions

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



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?

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