Figure 1   Some curve singularities
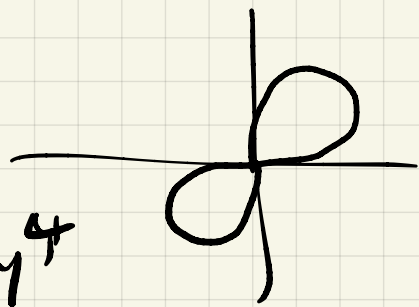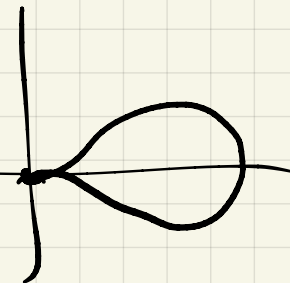
(a) node $xy = x^6 + y^6$
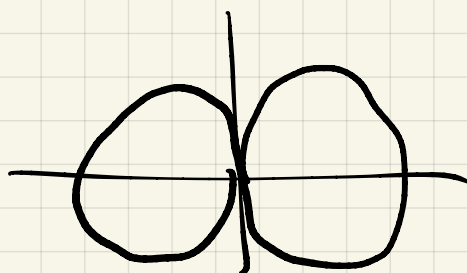
(b) cusp $x^3 = y^2 + x^4 + y^4$

(c) tacnode
$x^2 = x^4 + y^4$

(d) triple point
$x^2 y = xy^2 + y^4 + x^4$

Figure 2
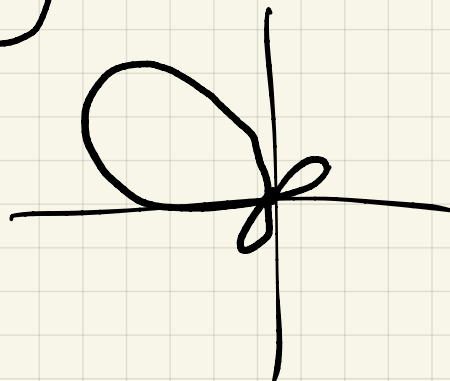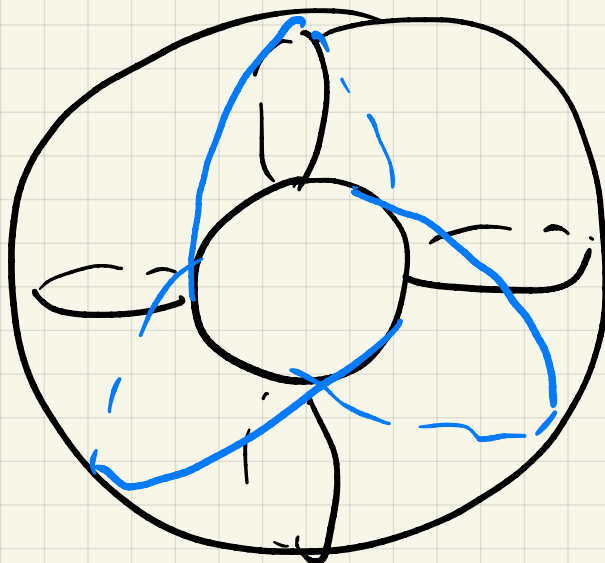
trefoil knot