Spring 2024 Math 584 - Singularity Theory
Homework 4&5 - Newton algorithm; Puiseux Theorem; Discriminant
Due: 16/4/2024

WALL: Wall, Singular Points of Plane Curves
DF: Dummit&Foote, Abstract Algebra

1. Find as many parametrizations as you can around the singular point $(0,0)$ of the set

$$y^4 - 2y^2x^3 - 4yx^5 + x^6 - x^7 = 0.$$

2. WALL, ex 2.6.10

3. WALL, ex 2.6.11

4. WALL, ex 2.6.13

5. DF, 14.6.31,32

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