

- Section 3.3. Exercise 12.
 - Section 3.4. Exercises 21, 22(a-d).
 - Section 3.5. E-mail the M2 script for lab 10.
 - Chapter 4.
 - Section 4.1. Exercise 11.
 - Section 4.2. Exercises 15,16.
 - Section 4.4. Exercise 12.
 - Let $I = I_1 I_2 I_3 \subset \mathbb{Q}[x, y, z]$ be the product of $I_1 = \langle z - x^2 \rangle$, $I_2 = \langle y, z \rangle$, and $I_3 = \langle x \rangle$. Compute the dimension of $V(I)$ at the points $(0, 0, 0)$, $(0, 0, 1)$, $(1, 0, 0)$, $(1, 1, 1)$. Draw a real picture of $V(I)$ and interpret your results geometrically.
 - Consider a curve $(x - 1)(4x^3 - 4y^3 - 9y^2) = 0$. Find all singular points on the curve. Determine the multiplicities of the singular points with integer coordinates.
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