

Errors in Volume 2

Chapter 4

- 1) page 72, corollary 4.4.9.b, line 2: and $g'_j = g_j/x_i^{a_j}$.
- 2) page 155, line 7: P -module $F_0 = \bigoplus_{i=1}^{r_0} P(-d_{0i})$
- 3) page 155, line 12: form $F_i = \bigoplus_{j=1}^{r_i} P(-d_{ij})$

Chapter 5

- 1) page 218, line 1 after definition 5.3.5: so simple that we know
- 2) page 220, example 5.3.9, line 11: we get $\text{HN}_{P/I_{111}}(z) =$
- 3) page 234, proof of proposition 5.4.2, line 5: equals $\text{HF}_M(\alpha + N) > 0$
- 4) page 241, proof of theorem 5.4.15, line -3: For $d = 0$, we have $\text{HS}_M(z) = z^\alpha \cdot \text{hn}_M(z)$
- 5) page 286, proposition 5.6.17.c, line 2: in $\sqrt{q_1} \cup \dots \cup \sqrt{q_s}$.
- 6) page 306, corollary 5.7.10, step I3): Return L_j and stop.
- 7) page 334, exercise 3.a): there exists a graded K -module $M \otimes_K M'$ such that $(M \otimes_K M')_d = \bigoplus_{i+j=d} M_i \otimes_K M'_j$ for all $d \in \mathbb{Z}^m$.
- 8) page 334, exercise 3.b): of $M \otimes_K M'$ is

Chapter 6

- 1) page 391, proposition 6.3.8.a: we let $f_i = \prod_{j=1}^{r_i} (x_i - a_{ij})$
- 2) page 395, example 6.3.13, last occurrence of step 5): the bottom right entry of \mathcal{M} should be -2.
- 3) page 400, proof of proposition 6.2.23, line 5: use Lemma 6.3.20 and
- 4) page 408, exercise 4, last line: $\mathcal{I}(\mathbb{X}) = (D_\pi(u_1), \dots, D_\pi(u_k))$, where $\pi = (\pi_1, \dots, \pi_n)$ and $\{u_1, \dots, u_k\}$ is the minimal monomial system of generators of $\text{LT}_\sigma(I)$.
- 5) page 500, tutorial 96.c: delete part 3) and replace it by
Show by example that the rule $\text{NF}_S(f_1 f_2) = \text{NF}_S(\text{NF}_S(f_1) \text{NF}_S(f_2))$ does not hold in general.
- 6) page 501, tutorial 96.h: Replace G by $G = \{x_1 x_2 - x_3^2, x_1^4 - x_1^2 x_2^2\}$ and the result by $\{x_1 x_2 - x_3^2, x_1^4 - x_3^4\}$.