

**Tabelle T.5. Minimalpolynome für  $n = 4$  ausgedrückt durch die elementaren symmetrischen Funktionen  $\sigma_1 \equiv a + b + c + d$ ,  $\sigma_2 \equiv ab + ac + ad + bc + bd + cd$ ,  $\sigma_3 \equiv abc + abd + acd + bcd$  und  $\sigma_4 \equiv abcd$**

*Polynome 2. Grades*

$$(a - b)^2 + (a - c)^2 + (a - d)^2 + (b - c)^2 + (b - d)^2 + (c - d)^2 = 3\sigma_1^2 - 8\sigma_2, \quad (\text{T.36})$$

*Polynome 3. Grades*

$$(a + b)(a - b)^2 + (a + c)(a - c)^2 + (a + d)(a - d)^2 + (b + c)(b - c)^2 + (b + d)(b - d)^2 + (c + d)(c - d)^2 = 3\sigma_1^3 - 10\sigma_1\sigma_2 + 12\sigma_3, \quad (\text{T.37})$$

*Polynome 4. Grades*

$$(a - b)^4 + (a - c)^4 + (a - d)^4 + (b - c)^4 + (b - d)^4 + (c - d)^4 = 3\sigma_1^4 - 16\sigma_1^2\sigma_2 + 4\sigma_1\sigma_3 + 20\sigma_2^2 - 16\sigma_4, \quad (\text{T.38})$$

$$ab(a - b)^2 + ac(a - c)^2 + ad(a - d)^2 + bc(b - c)^2 + bd(b - d)^2 + cd(c - d)^2 = \sigma_1^2\sigma_2 + 3\sigma_1\sigma_3 - 4\sigma_2^2, \quad (\text{T.39})$$