Errata for the Fifth Edition of *Ideals, Varieties, and Algorithms*June 3, 2025

Page 235, part (b) of Exercise 13: Replace " $\mathbf{V}(\operatorname{Per}_{2,2,3})$ " with " $\mathbf{V}(\operatorname{Per}_{2,2,3})\subseteq\mathbb{C}^6$ "

Page 363, part (c) of Exercise 20: Replace the first two lines with the following:

"To understand why we need both Q_1 and Q_2 , suppose that f(x) has three distinct roots in a field L containing \mathbb{Q} . There are 6=3! ways to order the roots as $\alpha_1,\alpha_2,\alpha_3$. Prove that for any of these six orderings, we have"

Page 363, part (c) of Exercise 20: At the end of part (c), add "Hint: Set $x_i = \alpha_i$ in the formula for D in Example 9 and note that $f(x) = (x - \alpha_1)(x - \alpha_2)(x - \alpha_3)$."

Page 430, Exercise 16: At the end of line 6, add: "This means that X_A is the smallest projective variety containing the image of Φ_A ."