

Math 4055/5055: Advanced Algebra II

Assignment 5

due 25 March 2025, end of day

Determine the Galois groups over \mathbb{Q} of the following polynomials:

1. $x - 7$
2. $x^2 - 7x + 1$
3. $x^2 - 7x + 10$
4. $x^3 - x^2 - 4$
5. $x^3 - 2x + 4$
6. $x^3 - x + 1$
7. $x^3 + x^2 - 2x - 1$
8. $x^4 - 25$
9. $x^4 + 4$
10. $x^4 + 3x^3 - 3x - 2$
11. $x^4 + 2x^2 + x + 3$
12. $x^4 + 8x + 12$
13. $x^5 + x - 1$
14. $x^6 - 5x^3 + 6$