

## MATH 252: EXERCISE 8.1.A

**Problem 8.1.A.** Let  $R = \mathbb{Q}[x]$ . Using the Euclidean algorithm, compute a greatest common divisor  $d(x) \in R$  of  $a(x) = x^3 + 2$  and  $b(x) = x^2 - 1$  and express  $d(x)$  as a linear combination of  $f(x)$  and  $g(x)$ .