

Homework 4

You may discuss the assignments with your classmates but need to write down your solutions independently. Be careful with your handwriting. Unclear solutions will be assumed to be wrong.

1. (20 points) Exercises 10.6, 10.7
2. (20 points) Exercises 12.2, 12.4
3. (20 points) Exercises 12.21, 12.23, 12.25
4. (20 points) Exercises 12.32, 12.38
5. (20 points) Exercises 12.42
6. (20 bonus points) Euclid's algorithm computes $GCD(a, b)$ for integers a and b . It is also known that $(\exists x, y : x*a + y*b = GCD(a, b))$. Can you modify Euclid's algorithm to output such x and y ?