**Write a pseudo and/or program code to solve the following problems!**

1. Euclidean Algorithm

example:

input: a=120, b= 35

output: gcd(a, b)=5

1. Extended Euclidean Algorithm
2. Factoring into primes: compute the prime factorization of an integer (book: 1.12.22)

example:

input: 12

output: 2 2 3

1. Find all divisors of an integer (book: 1.12.3)

example:

input:18

output: 1 -1 2 -2 3 -3 6 -6 9 -9 18 -18

1. Find an integer a with

a mod 2 = 1 and

a mod 3 = 1 and

a mod 5 = 1

(book: 1.12.6)