PROBLEM SET 4

Problem 1

Find x in the following equations by Euclidean Algorithm: $13x \equiv 1 \pmod{29}$

Problem 2

Find $\gcd(2n+1, 3n+2)$, where n is a positive integer.

Problem 3

Find x in the following equations by Extended Euclidean Algorithm: $134x \equiv 1 \pmod{467}$

Problem 4

Find x in the following equations by Extended Euclidean Algorithm: $384x \equiv 1029 \pmod{341}$

Problem 5

Find x in the following equations by Euclidean Algorithm: $384x \equiv 1038 \pmod{2418}$

Problem 6

Find x in the following equations by Euclidean Algorithm: $372x \equiv 183 \pmod{579}$

Problem 7

Find x in the following equations by Euclidean Algorithm: $2013x \equiv 2014 \pmod{2015}$

Problem 8

Find x in the following equation

$$2371x \equiv 1 \pmod{3872}$$

by using Euclidean Algorithm (EA) and Extended Euclidean Algorithm (EEA).