Jacynta Ryan Maths Assignment Results K00231373

**Program one**

|  |  |
| --- | --- |
| **N** | **Result** |
| 30 | 2 3 5 |
| 31 | 31 ( prime number) |
| 487 | 487 (prime number) |
| 8893 | 8893 (prime number) |
| 987654323 | 987654323 (prime number) |
| 131317171919 | 2147483647 |

**Program two**

i, a) gcd(8359,4962) = 1.

i, b) gcd(95243,24138) = 1.

**Program three**

1. P = 44 n = 1517 e = 49

**Result:** Cipher Text = 746, Private Key = 88

1. p = 153,817 q = 1,542,689 e = 202404606 P = 888999000

**Result:** Cipher Text = 179417357083, Private Key = 3517

**Program four**

1. C = 1069 n = 1517 d = 529

**Result:** Plain Text = 746

1. C = 179417357083 n = 237291793913 d = 3517

**Result:** Plain Text = 179417357083

1. It’s because the numbers are not co prime.