1. N = pq = 352717 and (p - 1) (q - 1) = 351520

Using (3.5) to compute,

(p + q) = N + 1 - (p - 1) (q - 1)

(p + q) = 352718 - 351520

p + q) = 1198

X^2 - (p + q)X + N = X^2 - 1198 X + 352717

= (X - 677) (X - 521)

This gives the factorization N = 352717 = 677, 521

1. N = pq = 77083921 and (p - 1) (q - 1) = 77066212

Using (3.5) to compute,

(p + q) = N + 1 - (p - 1) (q - 1)

(p + q) = 77083922 - 77066212

(p + q) = 17710

X^2 - (p + q)X + N = X^2 - 17710 X + 77083921

= (X - 10007) (X - 7703)

This gives the factorization N = 77083921 = 10007, 7703

1. N = pq = 109404161 and (p - 1) (q - 1) = 109380612

Using (3.5) to compute,

(p + q) = N + 1 - (p - 1) (q - 1)

(p + q) = 109404162 - 109380612

(p + q) = 23550

X^2 - (p + q)X + N = X^2 - 23550 X + 109404161

= (X - 17183) (X - 6367)

This gives the factorization N = 109404161 = 17183, 6367

1. N = pq = 172205490419 and (p - 1) (q - 1) = 172204660344

Using (3.5) to compute,

(p + q) = N + 1 - (p - 1) (q - 1)

(p + q) = 172205490420 - 172204660344

(p + q) = 830076

X^2 - (p + q)X + N = X^2 - 830075 X + 172205490419

= (X - 422183) (X - 407893)

This gives the factorization N = 352717 = 422183, 407893