From the public key: modulus is 712446816787 and encryption exponent is 6551.

The intercepted message is 496352944095. a = 01, b = 02, ..., z = 26.

First, factor the modulus.

FactorInteger[712 446 816 787]

{{740 513, 1}, {962 099, 1}}

Construct phi of n.

(740 513 − 1) * (962 099 − 1)

712 445 114 176

Construct the decryption exponent.

ExtendedGCD[6551, 712 445 114 176]

{1, {− 344 422 786 841, 3167}}

Mod[− 344 422 786 841, 712 445 114 176]

368 022 327 335

Decrypt the message.

PowerMod[496 352 944 095, 368 022 327 335, 712 446 816 787]

162 118 042 105

16   21   18   04   21   05
 p   u   r   d   u   e