Affine Cipher wowong wilgurs

Substitution Cipher

(x) = (x) (d=x) = (x)

d see Malliplianing

Eneryption processes

 $E(x) = (ax + b) \mod m$

E(2) -> enoughted letter.

23 position of plaintest letter in alphabet

(a and b -> keys:) in

m- size of alphabet

HELLO -> Musage , key -> [a=5, b=8]

H-> 7-> (5(7)+8) mod 26 -> 43 mod 26 -> 17-> R E-> 4-> (5(4)+8) mod 26 -> 28 mod 26 -> 2-> C L-> 11-> (5(11)+8) mod 26-> 63 mod 26-> 11-> L L-> 11-> (5(11)+8) mod 26-> 63 mod 26-> 11-> L O-> 14-> (5(11)+8) mod 26-> 78 mod 26-> 0.-> A

RCLLA -> enoughted masage.

Hellio - Derephit many

Decryption processes. . [[angio milital

$$D(x) = a^{-1}(x-b) \mod 2b$$

Substitution applies

a -> Multiplicative invers of a mod 26.

Multiplicative Invovs of 5 mod 26 is [2]

> 17 -> 21 (17-8) mod 26-> 21(9) mod26-

-> 2 -> 21 (2-8) mod 26 -> 21 (-6) mod 26 -> 4

-> 11 -> 21 (11-8) mod 26 -> 21 (3) mod 26 > 11 -

1 -> 1] -> 21 (11-8) mod 26 -> 21 (3) mod 26 -> 6 11

Martha - Whom the was for (A -> .0 -> .21 (0-8) mod 26 -> .21 (-8) mod 26 -> . 14.

7-> H

4 -> E

11-> L

11-> L

17 9 0

HELLO -> Decrepted massage.

35 pm (81 (19) 0) 2 - - 181 60 0

Mc It is swapplat