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Kelas : A

1) Exercise

1) FORTRAN

$$F = 5 + 20 \bmod 26 = 25 \Rightarrow Z$$

$$O = 14 + 20 \bmod 26 = 8 \Rightarrow I$$

$$R = 17 + 20 \bmod 26 = 11 \Rightarrow L$$

$$T = 19 + 20 \bmod 26 = 13 \Rightarrow N$$

$$R = 17 + 20 \bmod 26 = 11 \Rightarrow L$$

$$A = 0 + 20 \bmod 26 = 20 \Rightarrow U$$

$$N = 13 + 20 \bmod 26 = 7 \Rightarrow H$$

ZILNLUH

2) ZGXEIDZJN

$$Z = 25 - 15 \bmod 26 = K$$

$$G = 7 - 15 \bmod 26 = R$$

$$X = 23 - 15 \bmod 26 = I$$

$$E = 4 - 15 \bmod 26 = P$$

$$I = 8 - 15 \bmod 26 = T$$

$$D = 3 - 15 \bmod 26 = O$$

$$Z = 25 - 15 \bmod 26 = K$$

$$J = 9 - 15 \bmod 26 = U$$

$$N = 13 - 15 \bmod 26 = Y$$

KRIPTOKUY

3) TNZCNATXNA

$$T = 19 - 13 \bmod 26 = G$$

$$N = 13 - 13 \bmod 26 = A$$

$$Z = 25 - 13 \bmod 26 = M$$

$$C = 2 - 13 \bmod 26 = P$$

$$N = 13 - 13 \bmod 26 = A$$

$$A = 0 - 13 \bmod 26 = N$$

$$T = 19 - 13 \bmod 26 = G$$

$$X = 23 - 13 \bmod 26 = K$$

$$N = 13 - 13 \bmod 26 = A$$

$$A = 0 - 13 \bmod 26 = N$$

GAMPANGKAN

2) Kalimat : "Saya Maunya Keren" dengan nilai  $a = 9$   $b = 6$

Enkripsi:

$$S = 18 \Rightarrow 9(18) + 6 = 168 \bmod 26 = 12 \Rightarrow M$$

$$A = 0 \Rightarrow 9(0) + 6 = 6 \bmod 26 = 6 \Rightarrow G$$

$$Y = 25 \Rightarrow 9(25) + 6 = 231 \bmod 26 = 23 \Rightarrow X$$

$$A = 0 \Rightarrow 9(0) + 6 = 6 \bmod 26 = 6 \Rightarrow G$$

$$M = 12 \Rightarrow 9(12) + 6 = 114 \bmod 26 = 10 \Rightarrow K$$

$$A = 0 \Rightarrow 9(0) + 6 = 6 \bmod 26 = 6 \Rightarrow G$$

$$U = 20 \Rightarrow 9(20) + 6 = 186 \bmod 26 = 4 \Rightarrow E$$

$$N = 13 \Rightarrow 9(13) + 6 = 123 \bmod 26 = 19 \Rightarrow T$$

$$Y = 25 \Rightarrow 9(25) + 6 = 231 \bmod 26 = 23 \Rightarrow X$$

$$A = 0 \Rightarrow 9(0) + 6 = 6 \bmod 26 = 6 \Rightarrow G$$

$$K = 10 \Rightarrow 9(10) + 6 = 96 \bmod 26 = 18 \Rightarrow S$$

$$E = 4 \Rightarrow 9(4) + 6 = 42 \bmod 26 = 16 \Rightarrow Q$$

$$R = 17 \Rightarrow 9(17) + 6 = 159 \bmod 26 = 3 \Rightarrow D$$

$$E = 4 \Rightarrow 9(4) + 6 = 42 \bmod 26 = 16 \Rightarrow Q$$

$$N = 13 \Rightarrow 9(13) + 6 = 123 \bmod 26 = 19 \Rightarrow T$$

MGXGKGETXGSQDQT

Deenkripsi:

Mencari  $a^{-1}$ :

$$\gcd(9, 26)$$

$$26 = 9 \cdot 2 + 8$$

$$9 = 8 \cdot 1 + 1$$

$$8 = 1 \cdot 8 + 0$$

$$t_0 = 0, t_1 = 1$$

$$t_2 = (t_0 - (q_1 \cdot t_1)) \bmod 26$$

$$= (0 - (2 \cdot 1)) \bmod 26 = 24$$

$$t_3 = (t_1 - (q_2 \cdot t_2)) \bmod 26$$

$$= (1 - (1 \cdot 24)) \bmod 26$$

$$= -23 \bmod 26 = 3$$

$$a^{-1} = 3$$

$M = 12 \Rightarrow 3(12 - 6) = 18 \bmod 26 = 18 \Rightarrow S$   
 $G = 6 \Rightarrow 3(6 - 6) = 0 \bmod 26 = 0 \Rightarrow A$   
 $X = 23 \Rightarrow 3(23 - 6) = 51 \bmod 26 = 25 \Rightarrow Y$   
 $G = 6 \Rightarrow 3(6 - 6) = 0 \bmod 26 = 0 \Rightarrow A$   
 $K = 10 \Rightarrow 3(10 - 6) = 12 \bmod 26 = 12 \Rightarrow M$   
 $G = 6 \Rightarrow 3(6 - 6) = 0 \bmod 26 = 0 \Rightarrow A$   
 $E = 4 \Rightarrow 3(4 - 6) = -6 \bmod 26 = 20 \Rightarrow U$   
 $T = 19 \Rightarrow 3(19 - 6) = 39 \bmod 26 = 13 \Rightarrow N$   
 $X = 23 \Rightarrow 3(23 - 6) = 51 \bmod 26 = 25 \Rightarrow Y$   
 $G = 6 \Rightarrow 3(6 - 6) = 0 \bmod 26 = 0 \Rightarrow A$   
 $S = 18 \Rightarrow 3(18 - 6) = 36 \bmod 26 = 10 \Rightarrow K$   
 $Q = 16 \Rightarrow 3(16 - 6) = 30 \bmod 26 = 4 \Rightarrow E$   
 $D = 3 \Rightarrow 3(3 - 6) = -9 \bmod 26 = 17 \Rightarrow R$   
 $Q = 16 \Rightarrow 3(16 - 6) = 30 \bmod 26 = 4 \Rightarrow E$   
 $T = 19 \Rightarrow 3(19 - 6) = 39 \bmod 26 = 13 \Rightarrow N$

SAYAMAUNYAKEREN