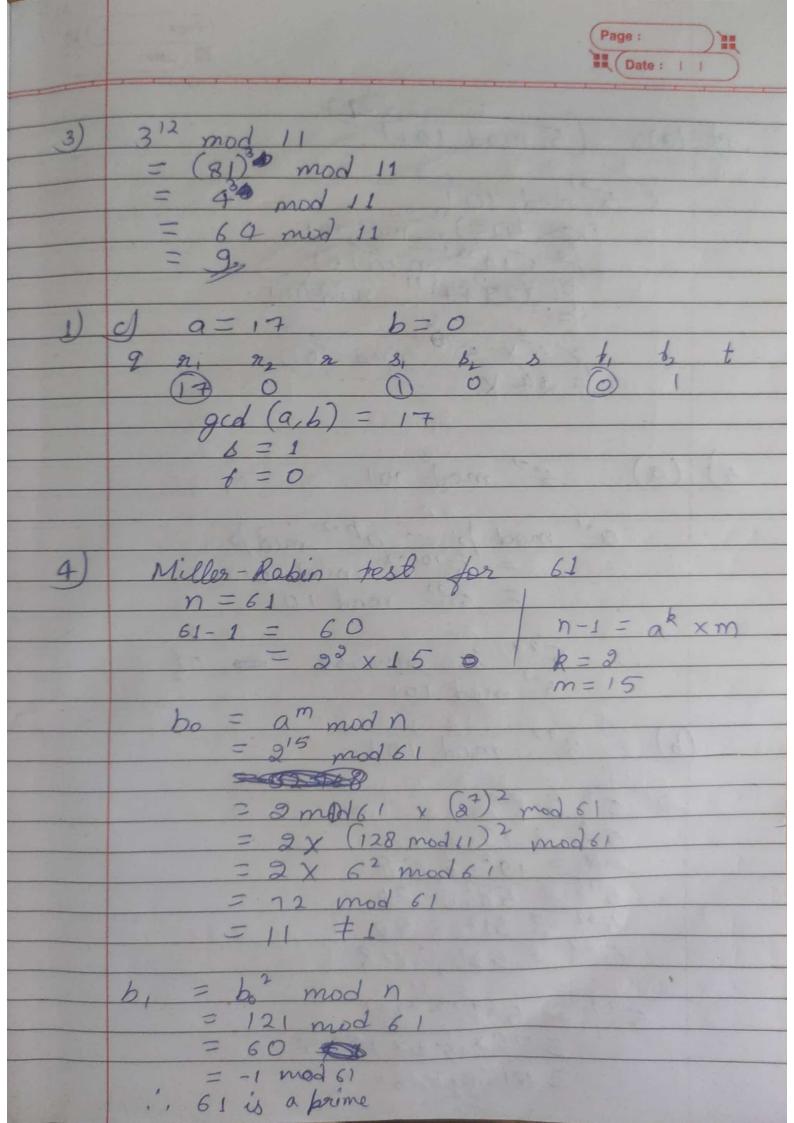
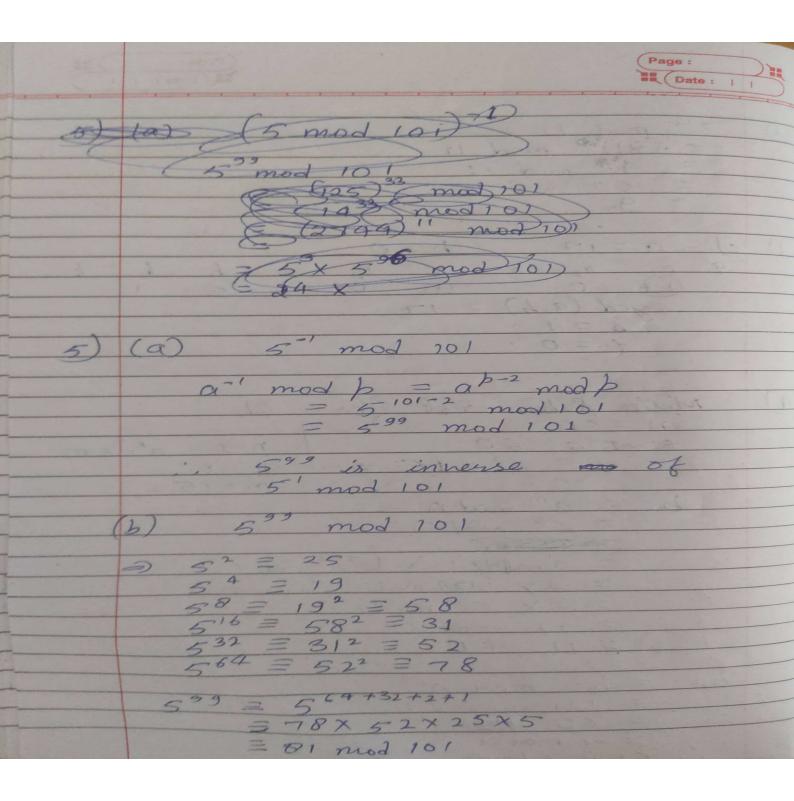


b) 
$$a = 161$$
  $b = 28$ 

9  $\frac{1}{12}$   $\frac{1}{1$ 





(c)  $5x = 31 \pmod{101}$ 

 $\chi = 5^{-1} : 31$ 

= 81.31

= 87 mod 101

201 123

	A SAME OF		4	
	T A		11	pos
	Julos	710	V	5
-	- LOW H. W.	Article Section	Ohner	

Use a hill cipher to encipher the nessage "we live in an insewer world". Use the following key

 $K = \begin{bmatrix} 03 & 02 \\ 05 & 07 \end{bmatrix}$ 

messages = [ we [ 22, 4 ] 11, 8

Ve 21, 4

in = 8, 13

on 0, 13

in 8, 13

se 18, 4

cu 2, 20

re 17, 4

wo 22, 14

gl 17, 11

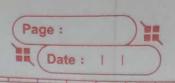
dz 4, 25]

cipher = K x message, nector = [874, 138 49, 111 71, 133

> 26,91 mod 26 50,131

46, 150

94, 208



3	[22, 8]	wi
	[ 22, 8 23, 7 19, 3	xh
	19,3	td
	24,1	46
Bottl 1	0.13	an
	24, 1	4 6
	10,14	k Ø
	20,20	uu
	7, 9	hi
	16,0	20
	11,6	19
	10, 13]	k n)
	1.	

@ > cipher = wixhtdybanybkouuhjgalgh

The plaintent "letus meet now" and the worresponding sighertent "HBCDFNOPIKIB" are given. You know that the algorithm is a Hill cipher, but you don't know the size of the key. Find the key matrix.

P = [11, 4, 19, 20, 18, 12, 18, 22, 14, 22, 23]C = [7, 1, 2, 3, 5, 13, 15, 10, 8, 11, 1]

Key matrix, K = [a b]

: C = K x P mod 26