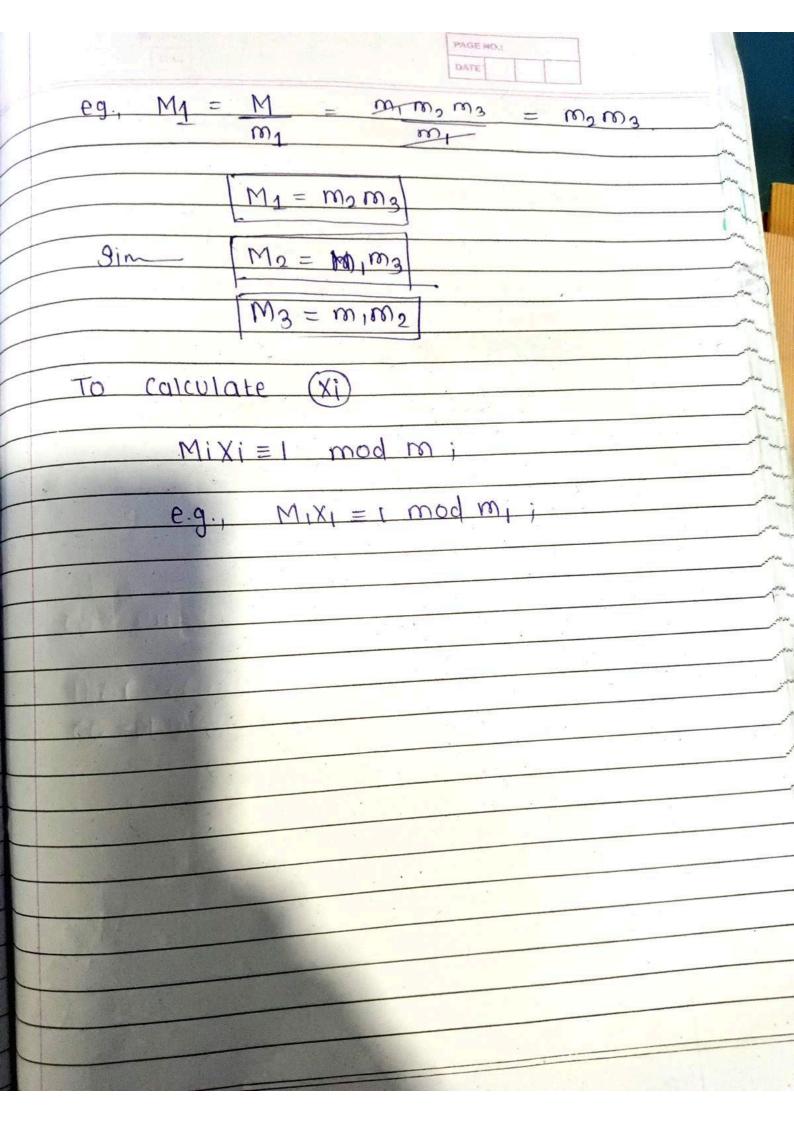
chienese Remainder Theorem :-1 chienese Remainder Theorem States that there always exists an 'x' that Satisfies the given congruence Chienese Remainder Theorem :if we want to find  $x \equiv a$ , (mod) the value of x then  $x = a_2 \pmod{m_2}$ the condition is > Ma  $x = a_3 \pmod{mod}$ GCD of m, m2, m3 they all should be co-prime to each other. gcd (m, m2) = gcd (m2, m2) = gcd (m3,m1) = 1 hallo I M : i.e., all coptime. 2 = (M1X191 + M2 X2 92 + M3 X393 + ... Mnxnan mod M M = m, \* me \* mg ... mo



General form :- $\alpha = \alpha_1 \pmod{m_1}$  $x = a_2 \pmod{m_2}$  $x = an \pmod{m_n}$ I find out common modulus My, M = m1 x m2 x m3 x ... mg  $\frac{1}{m_1} = \frac{M}{m_2} = \frac{M}{m_2}$ Find out inverse Mi, M2-1, ... Mn-1 With respect to m, m2, m3 ... mo oc = ((9, \* M, \* M, ) + (a2 \* M2 \* M2 ) + ... (9n \* Mn \* Mn 1) mod M

