Les Cowen two numbers on and on Substitut or devide of then from oue the for devides for where fix is the start fibonaci.

My many or divides on, => n is devide by n

To prooue >> f(m) dunds f(n) >> f(n) is divisible by f(m)

for any no, $\frac{a_1b}{b}$ $\frac{b-a_1}{b}$ fn = fn-1 + fn-2 / -> recurrence of fibonaces Hvr K=1) -> f (b) is divisible ky f (a)

assume for some value of k, the relation holds Producted for formal is also denumble by fa

$$f_{K+1} = f_{X+1} \times f_1 + f_{X} \times f_0$$

$$f_{X+1} = f_{X+1} \times f_1 + f_{X} \times f_0$$

$$f_{X+1} = f_{X+1} \times f_1 + f_{X} \times f_0$$

$$f_{X+1} = f_{X+1} \times f_1 + f_{X} \times f_{X-1}$$

$$f_{X+1} = f_{X+1} \times f_1 + f_{X} \times f_{X-1}$$

$$f_{X+1} = f_{X+1} \times f_1 + f_{X} \times f_{X-1}$$

$$f_{X+1} = f_{X+1} \times f_1 + f_{X} \times f_{X-1}$$

$$f_{X+1} = f_{X+1} \times f_1 + f_{X} \times f_{X-1}$$

$$f_{X+1} = f_{X+1} \times f_1 + f_{X} \times f_{X-1}$$

$$f_{X+1} = f_{X+1} \times f_1 + f_{X} \times f_{X-1}$$

$$f_{X+1} = f_{X+1} \times f_1 + f_{X} \times f_{X-1}$$

$$f_{X+1} = f_{X+1} \times f_1 + f_{X} \times f_{X-1}$$

$$f_{X+1} = f_{X+1} \times f_1 + f_{X} \times f_{X-1}$$

$$f_{X+1} = f_{X+1} \times f_1 + f_{X} \times f_{X-1}$$

$$f_{X+1} = f_{X+1} \times f_1 + f_{X} \times f_{X-1}$$

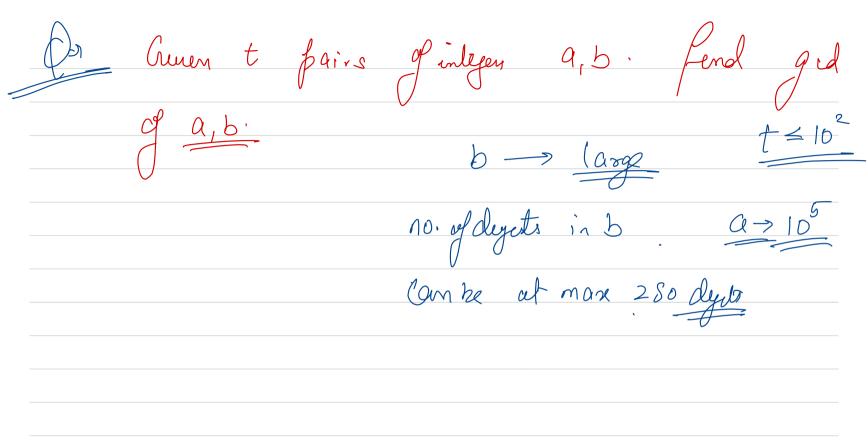
$$f_{X+1} = f_{X+1} \times f_1 + f_{X+1} + f_{X+1} \times f_{X-1}$$

$$f_{X+1} = f_{X+1} \times f_1 + f_{X+1} + f_{X$$

f(11-11)a is duumble by fa fak+a = fa+ak = fa+1 fak + fafak-1T(K+1)a = fa+1fak + fa fak-1

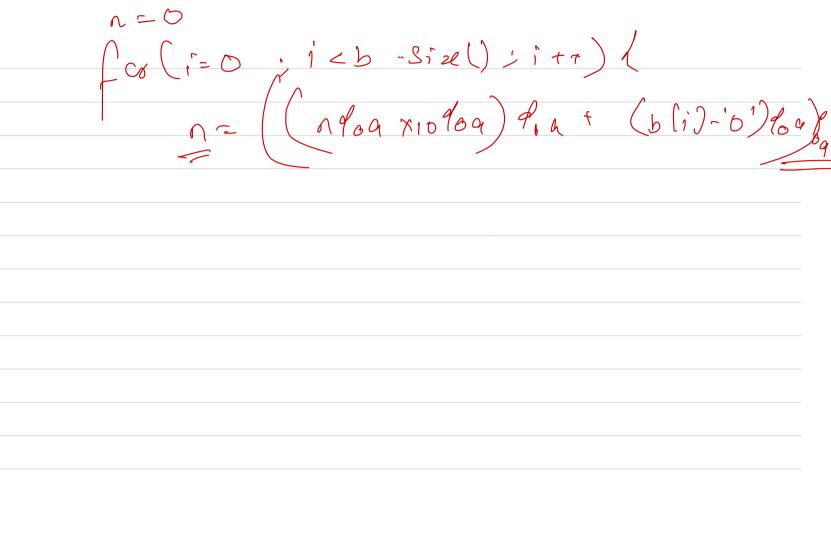
ky for beeaus X Se y are deuxeble by fa => fix+va is

Also deuxble by fa.



$$b = x_1 + x_2 + x_3 + x_4 + x_1 + x_1 + x_2 + x_2 + x_3 + x_4 + x_4 + x_4 + x_4 + x_4 + x_5 +$$

$$b = \frac{1}{2} \frac{1}{2}$$



ant by = if we ray all sas d axfby=d TLE - for all for weli'va

ax + by = dax = d - byInstead of going to all possible values of, Can we go to fewer values of y that can make RMI alweste by a ??

an * by = d any how any cost, you got the aa = d - byfirst value gy fer wind RHS is densble be a. an=d-by -1 Let's say the first value an=d-b(y1+a) an = d- by, +2a) and god air Cen = On-b(y, +3a)

y, is the first value max value of y >> 2 How to get (d-by1) da a == 0 ddaa - (bdaa) (ydoa) = 0 an + by ad a) doa - (ad b)

d do a - (bdon) (dd do g) ===0 Mis is the first value of y $y, \rightarrow 0$ y, 3 d loa × Mod Inv (b, a) loa
entended cueled
La lag