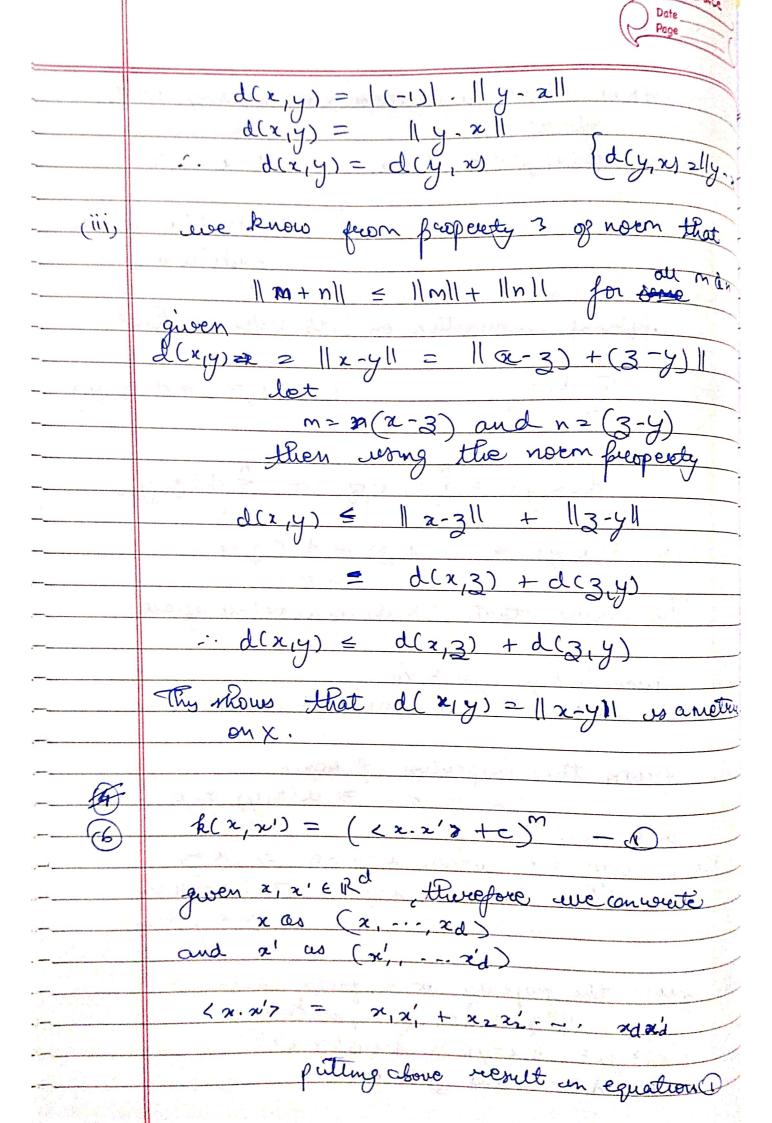
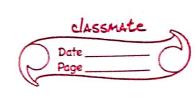


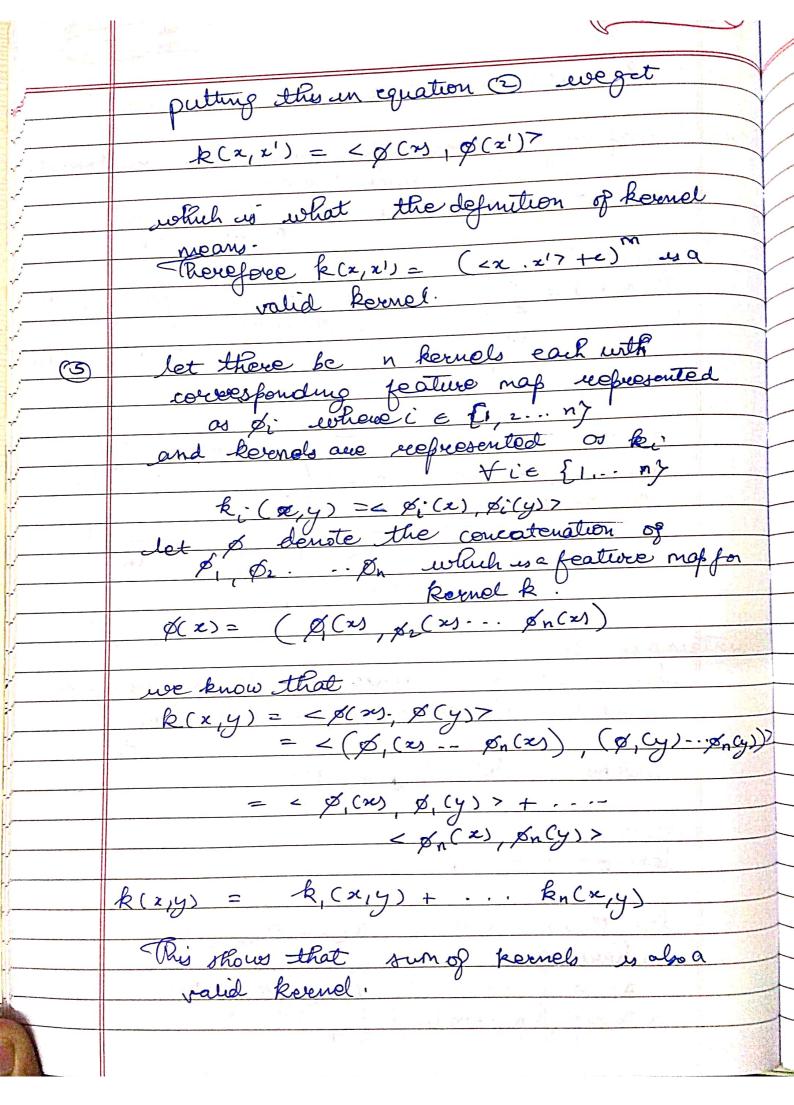
	A DEPARTMENT OF THE PERT OF TH
Mr.	-d (x,y) =0 when x word is equal to
76	world y. U
N.	when is equal to wordy then thereur
No.	be no flage in the word where different
~	be no flave in the world where different letters are used which gives d(x,y) =0.
Tarada	ausch would
(11)	let at m places in the world 2 andy different
	letters are present which means
Y	d(x,y) = 0
	mularly up use look trong 4 and x with
	reexpect to x the same places will have
,	dute yout latters while also area of (4)
	different letters which also gues d(y, z)=,
	d(r,y) = d(y, x)
۰۰۰۰ کی در	think of d(x: 1) by so To
	think of d(xi, yi) for position i in the
	$d(x; ui) = \{1, 6; zu_i\}$
	$d(x_i,y_i) = \begin{cases} 1, & (x_i \neq y_i) \\ 0; & (x_i = y_i) \end{cases}$
	let there be some 3 = [3,3n]
1	3 - (Si3n)
-	A Carl
**************************************	
	$\frac{1}{2}\left(2:V\right) = \frac{1}{2}\left(2:V\right)$
	d(3:14) = { 1 ; 3: # 4.
	10 i 31=4'
2)	
	a(x; y) = then there combe three
	conditions if we have 3.
2 1	of $d(x;y;)=1$ then there combe three conditions if we have $3:$ either $x_i=3:$ and $y_i \neq 3:$ or $f \Rightarrow d(x_iy_i)=1$ $x_i \neq 3:$ and $y_i = 3:$ or $f \Rightarrow d(x_iy_i) \leq 2$ $x_i \neq 3:$ and $y_i \neq 3:$ $f \Rightarrow d(x_iy_i) \leq 2$
.\-	x: + 3; and 4:=3! OR J
, a	zi +3; and y: +3: =) d(xiy) <2
	0. 41

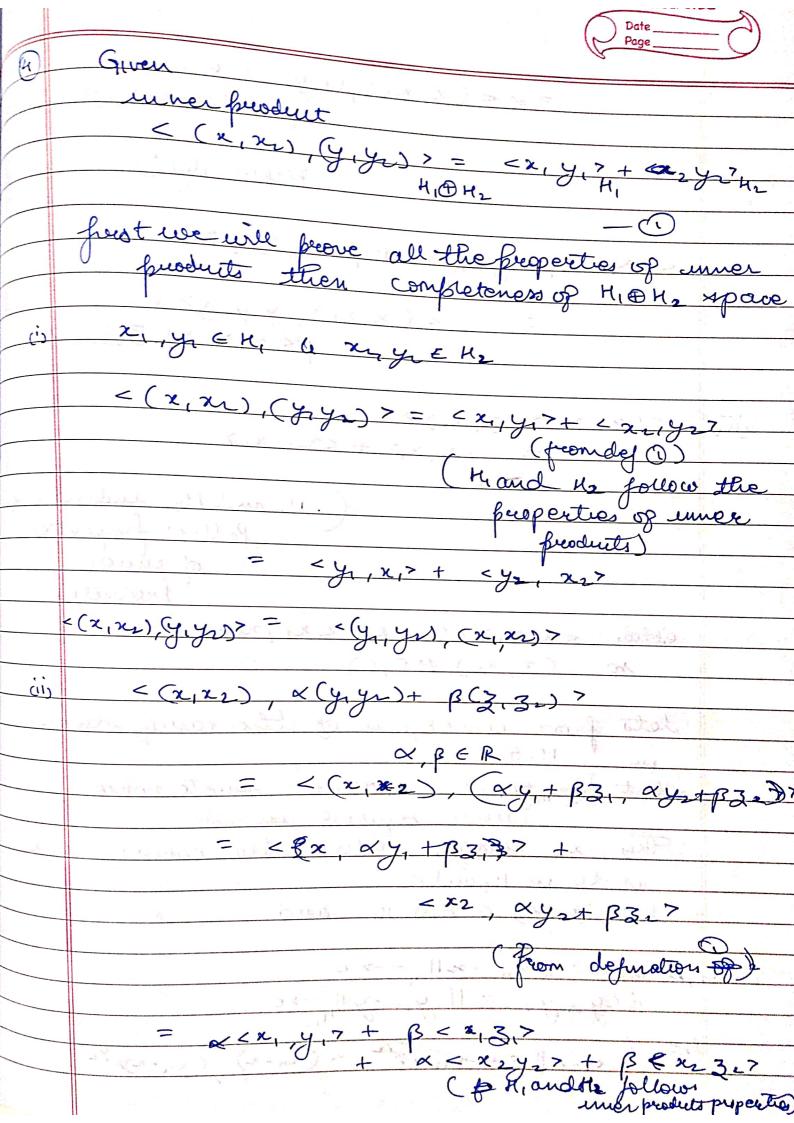
	from above conditions we on say that
	d(x; 31
	d(xi,yi) ≤ d(zi,3)+d(3i,yi)
	with all the three
	conditions )
	many 193
	alle a la l
	applying summation on both order we have
	$\sum_{i=1}^{n} d(x_i, y_i) \leq \sum_{i=1}^{n} \left(d(x_i, y_i) + d(y_i, y_i)\right)$
	stranger of the second rolls
	$d(x,y) \leq \sum_{i=1}^{n} d(x_i,y_i) + \sum_{i=1}^{n} d(x_i,y_i)$
	·. d(x,y) & d(2,3) + d (3,y)
	This shows that (X,d) us a metruc space
	And the second of the second o
(3).	d(x,y) =   x-y
(3).	given d(x,y) =    n-y   and(x,   .  ) & us a normed linear space
(1	drom the properties of tooren
	11 ~ - ull >0 => d(x,y) =0
	and when
	1(x w)=1/2-4/1 =0 when x-y=0 =) x=y
	1 20 x = y = 0 > 11 x - y 11 = 0
	and when $x-y=0 \Rightarrow x=y$ $d(x,y)=  x-y   = 0  \text{when } x-y=0 \Rightarrow   x-y   = 0$ $d(x,y)=0  d(x,y)=0$
	the first of a section of
	un the property to 2, from norm
(II	1112/12/13/ wehave
	$d(x_1y) =   x-y   =   (-1)(y-x)  $ here $\lambda = -1$ and $3 = y-2$
	d(11/2) = 11/2 = 11/2
	here d=-1 and 2



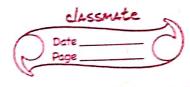


	Page
4	$k(x,x') = (x,x'+\cdots xdxd+c)^{m}$
-	
_	expanding above folynomial using multinomial  theorem, given below.  * p(2, 2d) = (m) / xt  (n,,nd) t=1
	theorem given below.
_	(n, -, nd) + = 1
_	
_	$\begin{array}{c c} & & & \\ \hline & & \\ \hline \end{array}$
	$f(x,x') = \sum_{n_1,\dots,n_{dn}} \frac{n_1 \cdot n_{dn}}{n_1 \cdot n_{dn}} = \sum_{n_1,\dots,n_{dn}} n_1 \cdot $
_	n,+n2ndn=m +=1
_	n,, n2 ndn 20
_	
	= > (m) /(x+) to ndn.
_	$n_1+n_2-n_d = m$ $n_1-\dots n_d = m$
	n,ndn20
	(m) (x't) c ndn
4	$\left( n_1 - n dn \right) + 2n$
_	Jet 15 = In above sumation according to  nultrionial theorem, we have (m+d)  d
_	Let \$ 600 = In above summan. I mtd
_	multinomial theorem, acc
_	n + 0 = (m + d)
_	terems let mo
_	
_	let of co
_	2 21
_	let p(xs = (a, ad 41m, d)
_	where a ACXE) Toda
	$Q = \begin{pmatrix} 1 & 1 & 1 \\ 1 & 1 & 1 \end{pmatrix}$





= x = (x, x2), (y, y2) > + B = (2, x2), (3,32) ( focom dof ()) < (m, m), x (y, yr) + p (3,32)? = < (x, x2), (y, y, 5 ? + B<(x, x2), (3,3,)?  $\langle (x, x_1), (x, x_1) \rangle$ = (21,21) + (22,22) either < x, x, > >0 Ot < x, x, >>0 so (x, n) \$(0,0) en H. DHz. let {(xn, tyn) f ∈ H, & H2 denote some caulty organice in They zn and yn individually converge to x let (x, y) & H, DH2 and dex, , x) der= 11 xn - x11, -> 0 d(yn,y) = 11 yn-y11,->0 let || xn-x || = < xn/xxx < (2n-2) (xn-x) /2



= 11 (2n,yn) - (2,y)11 H. (1) H2 (2, yn)-(x,y), (xn,yn)-(x,y) < (2n-2), yn-y), (2n-x, yn-y) < (xn-n) (xn-x)> + < (yn-y) (yn-y) 1 2n-2 1 + 11 yn-y 1 + 1 d(xn,yn),(x,y)) = [ ||xn-x||<sup>2</sup> ||yn-y||<sup>2</sup>] Thy terms unde rest converges to o Prevefore The broves the completeness of the Hittert pare 1, 1 Hr. wia hilbert space.