

w. w = E x: y: (-1 - b)

= [ (x; -x; y; b)

= \( \times \alpha \: \ta \) \( \times \) \(

Hence  $= \sum_{i=1}^{N} \alpha_i = \sum_{i=1}^{N} \alpha_i$  as

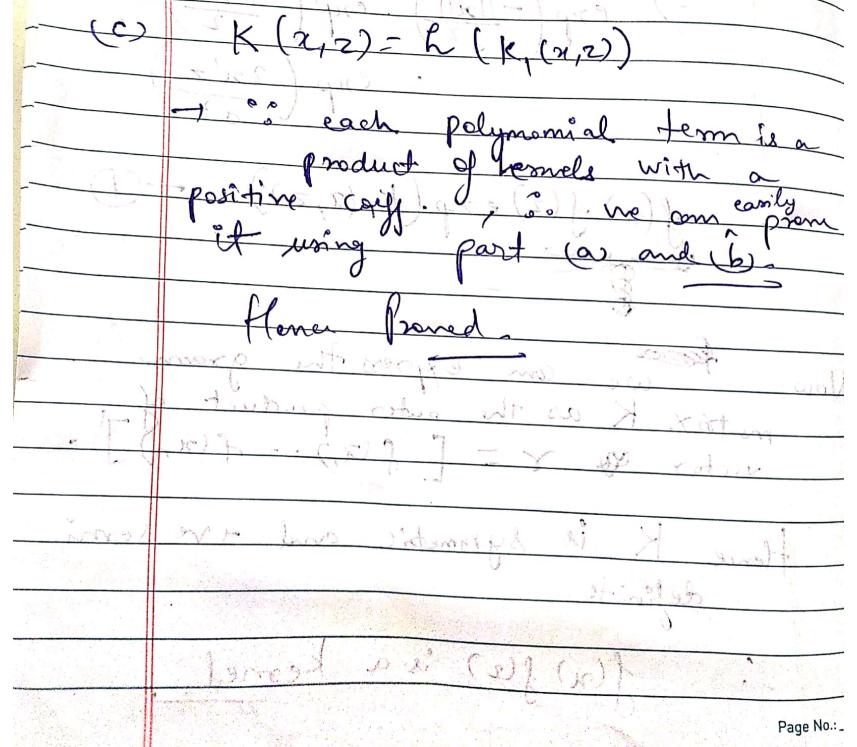
1 (a) 4. (a) 4. (a) 4. (a) 4. (a) 4. (a) 4. (b) 4. (a) 4. (b) 4. (b) 4. (c) 4.

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Ans 3	The state of the s
0 3	(a) To prove
	to the transle
	$K(\alpha_{,z}) = K_1(\alpha_{,z}) + K_2(\alpha_{,z})$
0	
- Bool:	$K_{1}(\alpha,z)=\langle \phi_{1}(\alpha),\phi(z)\rangle-0$
	1 (2/2) - (p) (x), p(z) > -0
Como	K (0-) - ( ) / 0
	$K_{2}(a,z) = \langle \phi(a), \phi(z) \rangle$
	putling cgn (1) &(2) in the about
	a som
	20 / 1 / 2 / 2 / W.W. Sheet
K (a,	$z) = \langle \phi_1(x), \phi_1(z) \rangle$
	$+$ $\left\langle \left\langle \left$
	(12(1), 12(3)
/	
<	φ,(2) φ,(2) φ,(2) (1)
	] [ [2 ]
	From egn (9)
	we can see that K(2,2)
	can be expressed as an inner
	can be expressed as an inner product.
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	Coamina Willi Camboamina

6	K(21) = K (21/3) K2 (21/3)
- froof -	gram matrix K. for K is the
	clement - by - clement product (i.e.  Hadamard Product) of kind kz.
Supp	ose that K, & K2 are covariance
	notrices of $(x, -x_n)$ and $(y, -y_n)$ .
The second of	n K is simply the covariance matrix of (x,y, - Xnyn) implying that it is symmetric and positive definite.
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d	$k(u,z) = exp(K_1(u,z))$
Proo	1 The state of the
	$enp(x) = \lim_{n \to \infty} \left( \frac{1 + x + \frac{x}{n}}{n!} \right)$
	Hence $\rightarrow$ $k(x,z) = \dim(k_{2}(x,z))$ $n \rightarrow \infty$
Jus of Fitz	By using () programmer
21 41	white property of the straint of the
	Cee that I cam domain
	Caroles Constant
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1. in egn (1)

 $K(n,2) = f(n) f(2) \exp(k(n,2))$ 

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Kernel

(noduct of 2 kernel is also a valid kernel.