	entre dos señales pe						
	$(x) \in \mathbb{R}, \mathbb{C}$ ; se puede ex ia de la diferencia entre elle						
	3						
$d^2(x_1, x_2) = \bar{P}_{x_1 \dots x_n} =$	$= \lim_{T \to \infty} \frac{1}{T} \int_{T}  x_1(t) - x_2(t) ^2 dt$	$ t ^2 dt$ .					
$(x_1, x_2)$ $(x_1 - x_2)$	$T \to \infty T J_T$	71					
	ñales como se muestra a c	ontinua-					
ción:							
$x_1$	$(t) = Ae^{jw_0t}$						
	$t) = Be^{j5w_0t}$						
$\begin{array}{l} \text{con } w_0 = \frac{2\pi}{T}; T, A, B \in \\ \text{las dos señales.} \end{array}$	$\mathbb{R}^+$ . Determine la distand	cia entre					
				+-+			
, , , , , ,	Lim 1 ST Aejwot	- R s Swot 2	dż				
	T-000 T 0	00					
	1 4 (1) 4 (1) 1 A 1 W	t O ismot z					
	X111 - X1+1 =   A e 1 Wo	Be ej 6 wot + B2					
	1 A - 2A	Be. IBE					
, T	j 6wo€						
Cim 1 0 (A2-2	ABe + B2) 06						
Lim + [ So A2dt	-ZAB Sej swot dt + SB2	dt					
$\int_0^1 A^2 dt = A^2 T$							
	7	C : (2T)	.7 ., (ZT).				
2 - 2AB Seiwot = -	2AB \ \ \frac{1}{\infty} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	e [e [2]]	.7 16/2T).C				
2 - ZAB Seiwoe = -:	2AB \ \frac{7 \in 4}{\in 600} du = \frac{-2AB}{\in 600}	$e^{\int_{12\pi}^{12\pi} e^{i6\left(\frac{2\pi}{4}\right)}$	.7 16(2T).C	Ц=	. j 6₩ <del>c</del> Ł		
2 - 2AB Seiwot = -	2AB \( \int \frac{7}{1600} \) du = \( \frac{-2AB}{1600} \) = \( \frac{-2AB}{1600} \)	e j6 (2 m). e j 2 A B j6 Wo	.7 16/2T)·C	u =	. j6Wot	t	
$2 - 2AB \int_{0}^{T} e^{i\omega x} e^{-x}$ $3 \int_{0}^{T} B^{2} dt = B^{2}T$	2AB \( \frac{7 \in 4}{j6w0} \) \( \frac{2AB}{j6w0} \) \( \frac{2AB}{j6w0} \)	e j 2AB j 6 Wo	.7 16/2T)·C	u = du •	: j6Wot : j6Wod : j6Wo	6	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2AB \( \int \frac{7600}{1600} \) \( \frac{2AB}{1600} \) \( \frac{2AB}{1600} \) \( \frac{2AB}{1600} \)	e j6(2T)	.7 16/2T)·C	u= du•	j6Wot ; 6Wod = Ju j6Wo	t	
$\int_{0}^{\infty} \beta^{2} dt = \beta^{2} T$		e j 2 A B j 6 W o	.7 16/27-1·C	u = du = dt	j6Wot . j6wod = Ju	<del>6</del>	
$ \frac{2}{3} \int_{0}^{T} 8^{2} dt = 8^{2}T $ $ \frac{A^{2}T}{\int_{0}^{2} 6(z^{2}V_{f})} e^{ijz\pi} + \frac{2AB}{\int_{0}^{2} 6(z^{2}V_{f})} e^{ij\pi} + \frac{2AB}{\int_{0}^{2} 6(z^{2}V_{f})} e^$		e j 6 (2 m).  e j 2 n B  j 6 wo	.7 36/2T)·C	u = du • dł	j6Wot ;6Wod = Ju	£	
$\int_{0}^{2} B^{2} dt = B^{2} T$ $A^{2}T - \frac{2AB}{\sqrt{6(2\pi V_{f})}} e^{i J Z \pi} + \frac{1}{\sqrt{6(2\pi V_{f})}} e^{i J Z \pi}$	<u>ZAB</u> + B <sup>2</sup> T i6(学)	e j 6 (2 m).  e j 12 m  f 2 A B  j 6 w o	.7 j6/27)·C	u = du = dt	j6Wot ;6Wod = Ju j6Wo	<del>C</del>	
$\int_{0}^{\infty} \beta^{2} dt = \beta^{2} T$	<u>ZAB</u> + B <sup>2</sup> T i6(学)	e is (2 m).  e is	.7 16/2T)·C	u = du · dł	j6Wot ;6Wod	<b>6</b>	
$ \frac{3}{3} \int_{0}^{3} 8^{2} dt = 8^{2} T $ $ A^{2}T - \frac{2AB}{j6(2\sqrt{7})} e^{j12\pi} + \frac{1}{3} e^{j12\pi} $ $ A^{2}T - \frac{2AB}{j12\pi} T e^{j12\pi} $	2AB + 8 <sup>2</sup> T 6( <sup>2</sup> F) 2AB T + 6 <sup>2</sup> T j12T	e j 6 (2 m).  e j 2 n B  j 6 w o	·7 16/27-100	u = du ·	j6Wot ;6Wod = Ju j6Wo	6	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2AB + B <sup>2</sup> T  2AB T + B <sup>2</sup> T  12T  + 2AB T + B <sup>2</sup> T	e i6 (2 ), e i 2 A B i 6 Wo	- e/ ()·C	u = ou ·	j6Wot ;6Wod = Ju j6Wo	<b>6</b>	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2AB + B <sup>2</sup> T  2AB T + B <sup>2</sup> T  12T  + 2AB T + B <sup>2</sup> T	e j 6 (2 m).  e j 12 m  f 2 A B  j 6 w o	·7 16/27 1·0	u = du ·	j6Wot ;6Wod = Ju	<b>t</b>	
$ \frac{3}{3} \int_{0}^{3} 8^{2} dt = 8^{2} T $ $ A^{2}T - \frac{2AB}{36(2\pi r)} e^{312\pi} + \frac{1}{3} $ $ A^{2}T - \frac{2AB}{312\pi} T e^{312\pi} $ $ \lim_{t \to \infty} 1 A^{2}T - 2ABT e^{3} $	2AB + B <sup>2</sup> T  2AB T + B <sup>2</sup> T  12T  + 2AB T + B <sup>2</sup> T	e i 6 (2 m).  e i 2 A B  j 6 W o	- e/ ()·C	u = ou ·	j6Wd ;6Wod = Ju j6Wo	<b>6</b>	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2AB + B <sup>2</sup> T  2AB T + B <sup>2</sup> T  12T  + 2AB T + B <sup>2</sup> T	e i 6 (2 m).  e i 2 n B  j 6 w o	.7 j6/27)·C	u = du·	j6Wot - j6Wo - j6Wo	6	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2AB + B <sup>2</sup> T  2AB T + B <sup>2</sup> T  12T  + 2AB T + B <sup>2</sup> T	e j 2 A B j 6 W o	- e/ ()·C	u = ou ·	j6Wd ;6Wod = Ju j6Wo	<b>6</b>	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2AB + B <sup>2</sup> T  2AB T + B <sup>2</sup> T  12T  + 2AB T + B <sup>2</sup> T	e i 6 (2 T).  e i 2 A B i 6 Wo	- e/ ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	u = du ·	j6Wet ;6Wod = Jan j6Wo	£	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2AB + B <sup>2</sup> T  2AB T + B <sup>2</sup> T  12T  + 2AB T + B <sup>2</sup> T	e j 2 A B j 6 W o	- e/ (- e)	u = ou ·	j6Wd ;6Wod = Ju j6Wo	£	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2AB + B <sup>2</sup> T  2AB T + B <sup>2</sup> T  12T  + 2AB T + B <sup>2</sup> T	e i 6 (2 T).  e i 2 A B  j 6 Wo	- e / ( - e /	u = ou ·	j6Wet ;6Wod = Ju j6Wo	6	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2AB + B <sup>2</sup> T  2AB T + B <sup>2</sup> T  12T  + 2AB T + B <sup>2</sup> T	e i 6 (2 m), e i 2 A B i 6 Wo	- e/s/==-)·C	u = du ·	j6Wdt , j6Wo 1 j6Wo	£	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2AB + B <sup>2</sup> T  2AB T + B <sup>2</sup> T  12T  + 2AB T + B <sup>2</sup> T	e i 6 (2 T),  e i 12 T	- e / ( - e /	u = ou ·	j6Wd ;6Wod = Ju j6Wo	£	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2AB + B <sup>2</sup> T  2AB T + B <sup>2</sup> T  12T  + 2AB T + B <sup>2</sup> T	e i 6 (2 m), e i 2 A B i 6 Wo	- e / ( - e /	u = du ·	J6Wdt J6Wd J6Wd	<b>6</b>	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2AB + B <sup>2</sup> T  2AB T + B <sup>2</sup> T  12T  + 2AB T + B <sup>2</sup> T	e i 6 (2 T).  e j 12 T	- e / ( - e /	u = du ·	J6Wot J6Wod = J6Wo		

b). Cuál e														
5kHz	rsor análo , aplicado	a la señ	al cont	inua $x($	t) = 3c	$\cos(1000$	$(\pi t) +$							
del pr	$2000\pi t)$ -oceso de	discretiz	zación.	En cas	so de q	ue la di	screti-							
	no sea a ado para l				lement	e un con	versor							
				$\dashv$		+								
Χ(ŧ	1 = 3 Co	s/1000 T	t) + S	sen (Zoc	∞π t) t	10 Cos (11	000 TE	1						
-				$\dashv$		+								
Fs				$\dashv$										
W1 = (	000π	fi = 1	00DT 2 TI	= 800	Tı =	1 500								
Wz = 20	000 T	12 - 2	.000 F ZF	- 1000	T2 =	1000								
W3 ~ 110	100 T		000x ZX	_= 550	00 T3	suo 0			1					
					No	aump'	le []	y q vi	5 <sup>†</sup>					
D 1														
Discreli	tamos	t =	n Is	= <u>C</u>										
				$\dashv$										
÷ 3 <i>C</i>	OS 1 T	n + S	Sen 2	₩. W +	10 (03	11 Tn								
				$\dashv$										
, ۵۲	<u>- T</u>	Siz =	211	Sl 3 =	11 -2	7 = IL 5								
V [ n	n] = 2 ()	os Ti o s	5 ( .	211. 1	13 6									
7.2	1] = 3 (	5	3 344	240 1	10 (63 1	_ n								
				$\top$										