	fall 2022 midterm-1
	Question 2
	a) $K(x_1, x_2) = \varphi(x_1)^T \varphi(x_2)$
4.1	$3c_1 = (a_1,b_1)  x_2 = (a_2,b_2)$
	=> (25 + 1a, jb, 1 - 1az, bz1)2
	$\Rightarrow$ $(25 + a_1a_2 + b_1b_2)^2$
N 341. 14	=> 625 + a,2a22 + b,2 Xb,2 + 500,02 + 50b,b2 +
	2 a, b, a, b,
	=> 125 + a12, b12, 150 a1, 150 b1, -12 a1 b1
613.5	125 a,2 b,2 Jsoaz, Jsobz , Jzazh
(10-5-1-45)	- Q(x) = 1 29, a?, b2, J50 a J50 b, J2 abl
S (b)	primal Form
	Objective min 1 11 W 112
	who Z
	5-t (125, a/4, 1/4, 550 3/4, 550/4, 55 3/4 W
	+ b) ≥ 1
- 30	
-	(129, 16, 1, 150/-4, 150, -154 TW + b) ≥1
10.1	(125, 16, 1, 050 /4, 050, 524 (TW+b) >1
	(125, 9, 4, - 503, -5502, √26 [ w +b)≥1
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	* Dual Formation	(Sapilaria)	
3	Total Control of the	m 3 H (0	
	⇒ ½ diy; =0, -d,+d2+ 5.t. d;≥0, ie11,2	d3 -d+ = 0	31
	s.t. a:20, 1611,2	2,3,43	
		0 4 25 2 4	
	L(d) = d, +d2+d3 +d4 -		21.136
	+ d2 (25+1-4,11.1-411)2 + 03 (2)		+
	d+2 65+ 1-3,-21,1-3,-21,2 72d,d	> (25+ 13/2, 421.1-4,1	1)2
	- 2d, d3 G5+1312, 1/21-14,11)2		
	+ 2d2d3(25+1-4,11-14,11)2-2		The second secon
	-2 < 3 < 4 (25 + 14, 114-3, -21)	•	J
		Charles and the charles are the charles and the charles are th	
T		1) = 1 - 1 - 2	
		d -	
	S (1+ V) + 71 = 021 Sept 35	The second	
		2 2 2 1 3	
	10-10-10-10-10-10-10-10-10-10-10-10-10-1	2 6 - 2 - 1 }	
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