

	Dorte Poge
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	Department - DHEP
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and the second	Computational Physics Final exam
SOL	
	Writing the numbers in given decimal
	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
	RI -> RI O.4x/o
1111	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
1	R2 > R2 - D.2xloR,
111	0.1x10 0.25x10° 0.5x10° x1 0.23x10 0 +0.35x10 -0.2x10 x2 - 0.9x10° 0.1x10 0.1x10 -0.3x10 x3 -0.9x10°
	70.50



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			0			4	

	O·Ixlo	0.25,10	0.5/0		7	F	T
	0	0.35x10	-6.5×10	X	-	0.23x10	1
(Jacob)		0.7x10	- D.35×10	X27		9.11×102	

R2 > R2 =

0.1x10	0.25x18	0.5x16		[A.23 da]
0	01×10	- 0.57×6°	/x,	= 1-0.79×10
0.	0.7×10°	-0.35x10	LXI	1-0.11x102

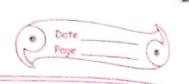
R3 - R3 - 0.710° R2

[0.1x10]	0.25×100	0.5x10	$\int X_{i}$	[0.13x10]4
0	0.1×10	-0.57x10 /	$/\times$	= -6.27×10
10	0-1-10 D	-0.31x10	XZJ	[-0.9x10]_

R3 7 F3 -0.31x10

						de
-	0.1x10	0.25×10°	0.5x100	X	0.23×10	,-
-	~ O	0.1x10	-0.57x100	X2 =	-0.27×10	-
4	. 0	0	O·Ixlo]	l x31	10.51×10	~

Thus, we have $(0.1 \times 10) \times_1 + (0.25 \times 10) \times_2 + (0.5 \times 10) \times_3 = 0.23 \times 10$ $(0.1 \times 10) \times_1 + (0.25 \times 10) \times_2 - (0.57 \times 10) \times_3 = -0.29 \times 10$ $(0.1 \times 10) \times_2 - (0.57 \times 10) \times_3 = 0.29 \times 10$



X3 - 6.29 x10

 $X_3 = 0.23 \times 10^{-} (0.5 \times 10^{\circ}) \times 0.29 \times 10^{\circ}$ $-(0.25 \times 10^{\circ}) \times -0.10 \times 10^{\circ}$ $= 0.11 \times 10^{\circ}$

Thus,

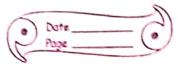
 $X_1 = 0.11 \times 10 = 1.1$ $X_2 = -0.10 \times 10 = 2.9$ $X_3 = 0.29 \times 10 = 2.9$

Q3 Sal

For at txidiagonal nxn matrix A AX = b

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Here code is written such that operation on a zoro element of matrix are not performed performed



-	rote
	Let the number of
	Let the number of steps for nx n matrix be $S(n)$ Therefore for nx n matrix
1	be S(n) Then,
-	CHAL
	Number of steps in making au to be 1
-	Number of steps in making an to be 1 = (3 divisions) = 3
_	Number of steps in making a to 0
	-3 multiplication + - 4 multipli
	Number of steps in making as to 0 3 multiplication + - translipti 3 subtraction
	- 26
	The state of the s
2	Then, we have perforin operation
	on hot x holl matrix
	So, Number of steps in solving (1-1) x(n+1)
	matrix = S(n-1)
1	
1	Then, on number of steps in getting value of x1 = 1 multiplications
1-46	Jeving varie of 1 substraction
En.) such that
	Land of graphy Obline Da Daller
40	So_{1} $C(n) - 3 + 6 + S(n-1) + 2$
	S(n) - 3+0+3(n-1/12
	S(n)-S(n+1) = 11
	$T_{\mathbf{p}}(\mathbf{n}) = 1$
	S(n) = S(n)
	Ilnati
1	The we have O(h) attended
	operations.
	Later than the second of the s

