

D1-140.0

MATRIX INVERSION FOR 24.2

LGP-30



FUNCTION

TO REPLACE THE ELEMENTS OF A SQUARE MATRIX WITH THE ELEMENTS OF ITS INVERSE. MATRICES OF ANY RANK GREATER THAN ONE WILL BE ACCOMMODATED. THE ROUTINE IS ENTERED AND LEFT WITHIN THE 24.2 INTERPRETIVE SYSTEM.

INPUT

THE ELEMENTS OF A SQUARE MATRIX IN CONSECUTIVE LOCATIONS ON THE DRUM. DATA MUST BE IN 24.2 FORMAT.

OUTPUT

THE ELEMENTS OF THE INVERTED MATRIX IN CONSECUTIVE LOCATIONS, IN 24.2 FORMAT.

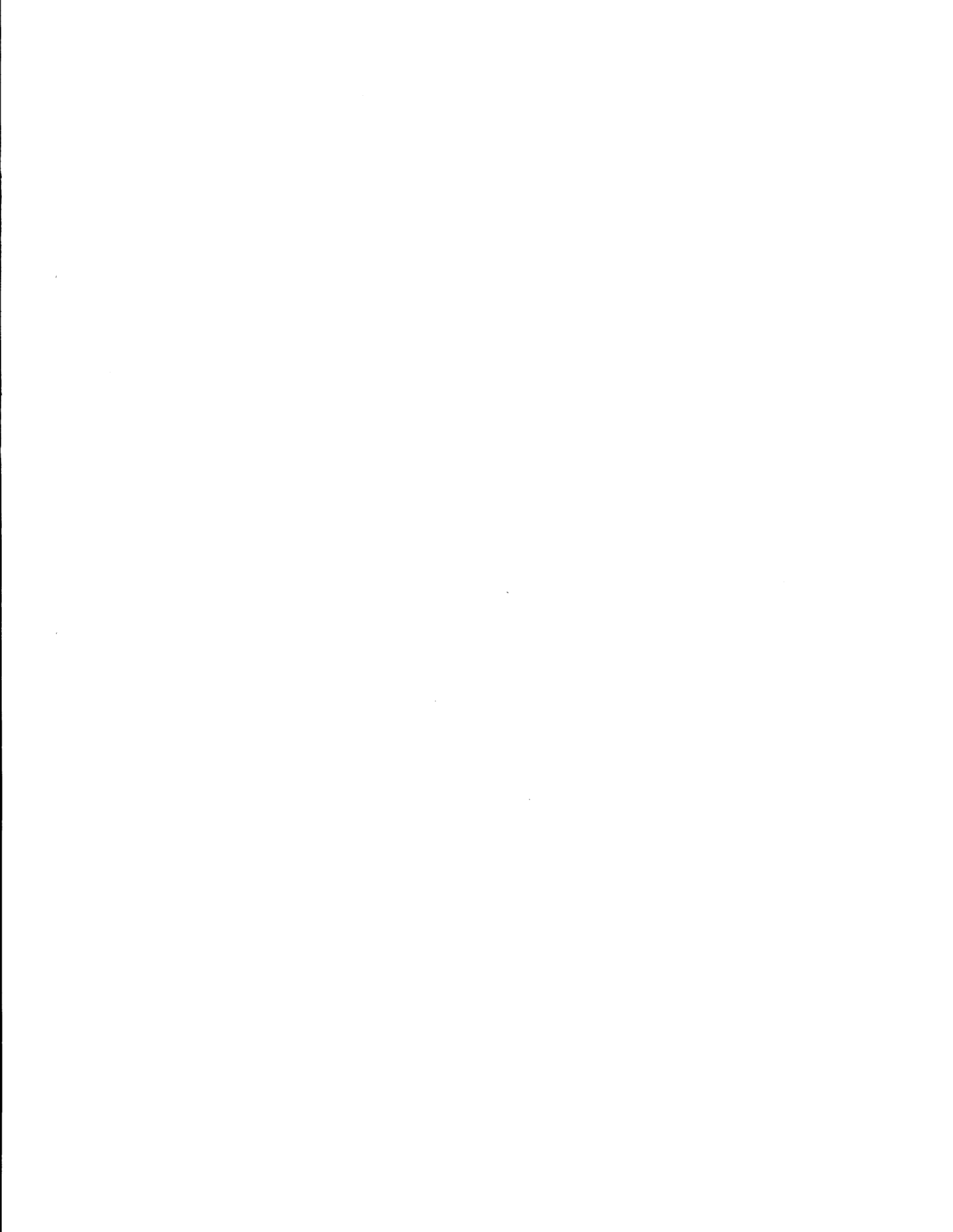
CALLING SEQUENCE

α	7E[]	LO OF MATRIX
$\alpha + 1$	7C[]	RANK OF MATRIX
$\alpha + 2$	8U[]	LO OF THIS ROUTINE

STORAGE

THIS ROUTINE OCCUPIES TWO TRACKS OF STORAGE.

JUN 15 1967
DATE: ~~10/13/60~~



PREPARED FOR:			PAGE 1 OF 4
JOB NO. 0222	PROGRAM NO.	PROGRAM PREPARED BY: C.O.	PROGRAM CHECKED BY:
PROBLEM: 242 Matrix Inversion			DATE 10-5-60
			TRACK 00

PROGRAM INPUT CODES	STOP	LOCATION	INSTRUCTION		STOP	CONTENTS OF ADDRESS	NOTES
			OPERATION	ADDRESS			
		<input checked="" type="checkbox"/>					
		0 0 0 0	X E	0 0 0 0	'		7E(M ₀)
		0 1	X B	6 2 3 2	'		7C(n)
		0 2	M	0 1 5 2	'	1@17	84(L ₀)
		0 3	H	0 0 2 4	'	<input checked="" type="checkbox"/> 2n	
		0 4	S	0 0 2 2	'	2@29	
		0 5	H	0 0 2 1	'	ctr.	
		0 6	A	0 1 4 9	'	4@29	
		0 7	H	0 0 2 5	'	<input checked="" type="checkbox"/> 2(n+1)	
		0 8	N	0 0 2 1	'	2(n+1)	
		0 9	M	0 1 6 1	'	5@2	
		1 0	H	0 1 6 3	'	2(n ² -1)	
		1 1	X A	6 2 3 2	'	<input checked="" type="checkbox"/>	
		1 2	A	0 0 2 2	'	2@29	
		1 3	Y	0 0 1 9	'		
		1 4	Y	0 0 2 0	'		
		1 5	A	0 0 2 1	'	<input checked="" type="checkbox"/> 2(n-1)	
		1 6	Y	0 1 5 5	'		
		1 7	Y	0 0 3 6	'		
		1 8	H	0 0 2 9	'		
		1 9	B	[]	'	<input checked="" type="checkbox"/> (Matr ²)	
		2 0	N	[]	'	(Matr ²)	
		2 1			'	ctr.	
		2 2	X Z	0 0 0 2	'	2@29	
		2 3			'	<input checked="" type="checkbox"/>	
		2 4			'	2n	
		2 5			'	2(n+1)	
		2 6	X R	6 3 0 0	'		
		2 7	X U	0 4 0 0	'	<input checked="" type="checkbox"/>	
		2 8	X 8 T	0 0 0 1	'		
		2 9	Y	0 1 2 4	'		
		3 0	X B	6 2 3 2	'		
		3 1	Y	0 0 3 5	'	<input checked="" type="checkbox"/>	

Royal McBee Corporation
DATA PROCESSING DIV.
PORT CHESTER, NEW YORK

CARRIAGE RETURN

LGP-30 CODING SHEET

PREPARED FOR:				PAGE 3 OF 14
JOB NO. 0222	PROGRAM NO.	PROGRAM PREPARED BY: C.O.	PROGRAM CHECKED BY:	DATE 10-5-60
PROBLEM: 24.2 Matrix Inversion				TRACK 01

PROGRAM INPUT CODES	STOP	LOCATION	INSTRUCTION		STOP	CONTENTS OF ADDRESS	NOTES
			OPERATION	ADDRESS			
		01 0 0	B	0115			
		0 1	A	0022		2029	
		0 2	Y	0117			
		0 3	S	0025			
		0 4	Y	0118			
		0 5	U	0113			
		0 6					
		0 7	YR	6300			
		0 8	XU	0400			
		0 9	B				
		1 0	H				
		1 1	XE	0000			
		1 2	U	0143			
		1 3	YR	6300			
		1 4	XU	0400			
		1 5	N				
		1 6	M				
		1 7	A				
		1 8	H				
		1 9	XE	0000			
		2 0	U	0130			
		2 1	YR	6300			
		2 2	XU	0400			
		2 3	N				
		2 4	M				
		2 5	H				
		2 6	XE	0000			
		2 7	B	0115			
		2 8	A	0024		2029	
		2 9	U	0046			
		3 0	B	0116			
		3 1	A	0022		2029	

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