

REVISION NOTICE

This description replaces previous descriptions of "Matrix Add Subtract 4," program D1-339.3. Program references have been changed to current designations.

FUNCTION

"Matrix Add Subtract 4" enables the interpretive system to add or subtract two matrices, A_{ij} and B_{ij} , which are the same size but are not necessarily square. The routine is entered and left in machine language, but uses program H1-24.3 for all arithmetic.

INPUT

The elements of matrices A and B are input in double precision floating point format. The elements of matrix A begin in A_0 and the elements of matrix B begin in B_0 .

CALLING SEQUENCE

<u>Location</u>	<u>Order</u>	<u>Address</u>	<u>Notes</u>
a	R	L_0	Initial location of this routine.
a + 1	U	L_0	
a + 2	Z	I_0	Initial location of interpretive routine.
a + 3	Z	ij	i in track, j in sector.
a + 4	Z	A_0	Lo of matrix A.
a + 5	A or S	B_0	Lo of matrix B.
a + 6	Z	C_0	Lo of result of matrix G.

MATRIX ADD-SUBTRACT 4

OUTPUT

The elements of result matrix C_{ij} are stored in double precision floating point format in consecutive memory locations beginning with location C_0 .

TIME

Approximately $1.8 \text{ } ij$ milliseconds are required.

STORAGE

1 track (64 words) is required for instructions and constants. No temporary storage is required.

Royal McBee Corporation

ELECTRONIC COMPUTER DEPARTMENT

DOUBLE PRECISION FLOATING POINT MATRIX ADDITION-SUBTRACTION

FUNCTION

To add or subtract two matrices, A_{ij} and B_{ij} , which are the same size but not necessarily square. The routine is entered and left in machine language, but uses DFPF for all arithmetic.

$$A + B = C$$

INPUT

The elements of matrices A and B in DFPF form; the elements of matrix A beginning in A_0 and the elements of matrix B beginning in B_0 .

CALLING SEQUENCE

LOCATION	ORDER	ADDRESS	NOTES
a	R	Lo	Initial location of this routine
a + 1	U	Lo	Initial Loc. DFPF
a + 2	Z	Lo of DFPF	i in track, j in sector
a + 3	Z	ij	Lo of first matrix
a + 4	Z	Ao	Lo of B matrix
a + 5	A or S	Bo	Lo of result matrix stor
a + 6	Z	Co	

OUTPUT

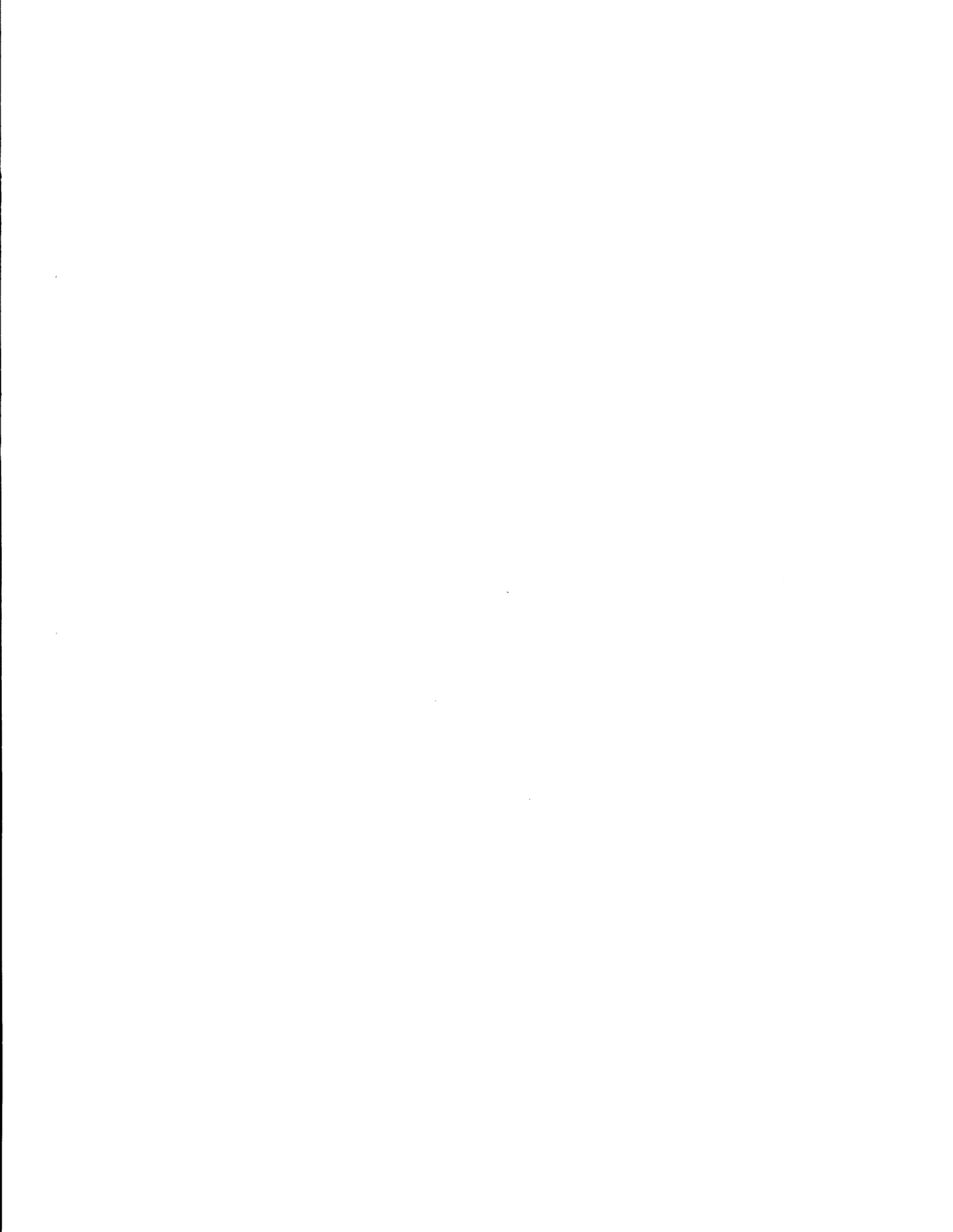
Matrix C_{ij} in DFPF format in consecutive memory locations beginning in location C_0 .

TIME

Approximately 1.8 ij seconds.

STORAGE

1 track for instructions and constants; no temporary storage.



LGP-30 CODING SHEET

(A) and (B) *can must have done for ... and ...*

PREPARED FOR: *0150* PROGRAM: *H.O* PROGRAM PREPARED BY: *H.O* DATE: *9/28/59* PAGE: *1/2*

PROBLEM: *Matrix Addition Subtraction (DPF)*

PROGRAM INPUT CODES	LOCATION	INSTRUCTION		STOP	CONTENTS OF ADDRESS	NOTES
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- 00 R60
- 01 L6
- 02 2 DPF
- 03 2 (03) 019
- 04 B L A
- 05 A 45 (0B)
- 06 H L C
- 07 etc

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DATA PROCESSING DIV.
PORT CHESTER NEW YORK

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0-26

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 DATE 9/28/59
 TRACK

0150

PROGRAM NO PROGRAM PREPARED BY PROGRAM CHECKED BY

Matrix Addition - Subtraction (D.P.F.P.)

RAM INSTRUCTIONS	STOP	LOCATION	INSTRUCTION		STOP	CONTENTS OF ADDRESS	NOTES
			OPERATION	ADDRESS			
	<input checked="" type="checkbox"/>	0032		BC		A	
		33	[B	
		34		CC			
		35		XE0000		<input checked="" type="checkbox"/> Exit	DPFP
,0000002		36		U0039		delay	
		37			4	1029	
		38					
		39		B0032		<input checked="" type="checkbox"/> A	
		40		A0046		3029	
		41		C0032			
,0000004		42		U0047			
		43	[<input checked="" type="checkbox"/> 1023	
		44				ca	
		45			4	1029	
		46			J	3029	
		47		B0033		<input checked="" type="checkbox"/> B	
		48		A0046		3029	
		49		C0033			
,0000004		50		U0055			
		51		WJ		<input checked="" type="checkbox"/>	
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		56		A0046		3029	
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		61		T0063			
		62		U0030			
		63		UC		<input checked="" type="checkbox"/> → Exit	

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