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NELSON RESEARCH LABORATORIES

STAFFORD

MATHEMATICAL PHYSICS LABORATORY.

Telephone:—Stafford 700.

Report No. NS t 84

Date 24.10.55.

Reference

Order No.

Front Sheet.
Data Sheet 1.
Figure sheets SG/10302,3.

DEUCE Subroutine No. 93 (R02)

Report by

N.P.L.

SUMMARY.

The attached document contains details of a DEUCE Subroutine which has been prepared and tested by N.P.L.

John
MATHEMATICAL PHYSICS LABORATORY.

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NS t 84
Sheet No.: 1.

Description. First order subroutine, reading in two signed 9-digit decimal integers.

Data. A and B two signed 9-digit numbers punched with signs in Cols. 1 and 11 and decimal punching in columns 2 to 10 and 12 to 20 respectively.

Result. A, B converted to binary as integers.
Failure indication on OS if card not decimally punched.

Failure. Enters the loop 21 - 28
9 - 24
21 - 29
if the card is not decimally punched.

TIME: $2\frac{2}{3}$ n.s. before 9-row single shot
4 n.s. after 9-row

Instructions for Use.

Stores Used.	13	14	15	16	19 ₂	20 ₂	20 ₃	21
Contents at Entry.	Link	-	-	-	-	-	-	-
Contents at Exit.	A	-	-	B	-	-	zero	zero
Occupies.	D.L. 2 ₀₋₃₁ , 3 ₀₋₂₀ .							
Entry.	2 ₁₁							
Constants available.	P ₆		in 3 ₆					
	P ₁ , 21-32		in 2 ₂₀					
	P ₂₋₁₀ , 12-21		in 2 ₂₅					

NOTE: There is no clear read in this subroutine. The waste instruction in 3₁₇ may be used for this purpose if required.

$2_{11} \quad 13 - 13_0$
 $3_0 \quad 12 - 24$
 $3_2 \quad 30 - 20_3$
 $2_3 \quad 30 - 21, (2mc)$
 $3_1 \quad 0 - 22_2 \quad X$
 $2_{13} \quad 0 - 19_2 \quad X$
 $3_{10} \quad 19_2 - 22_2$
 $3_{16} \quad 2_{25} - 15 (P_{2-10, 12-21})$
 $2_{30} \quad 0 - 14 \quad X$
 $2_0 \quad 14 - 22_2$
 $3_5 \quad 2 - 24$



