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DIGITAL COMPUTER LABORATORY
ILLIAC PROGRAM LIBRARY

Library Routine P 3 - 53

TITLE: Print n Digits of an Integer with or without a Sign.
(DOI or SADOI)

TYPE: Closed - with one program parameter. If routine is at
x then it is called into action by the orders

y		50	nF	
		50	yF	if a sign is desired and by the order
y+1		26	xF	

y		J0	nF	
		50	yF	if no sign is wanted
y+1		26	xF	

NUMBER OF WORDS: 20

TEMPORARY STORAGE: 0, 1, 2

ACCURACY: Exact

DURATION: Determined solely by punch speed

DESCRIPTION: When the subroutine is called into use, it prints the
integer $A \times 2^{-39}$ to n digits, where the parameter is
50 nF if a sign is desired and J0 nF if no sign is
desired. One space is punched after each number.

RESTRICTION: $11 \geq n \geq 1$

DATE	December 18, 1953	RT: 4/10/59
CODED BY	D.J. Wheeler	
APPROVED BY	J.P. Nash	

LOCATION	ORDER		NOTES
	00K(P3)		
0	40 F		Prepare count and link address
	41 2F		
1	S5 F		n to 2
	46 2F		
2	L4 19L		
	42 16L		
3	36 6L		Print sign if desired
	L5 F		
4	32 5L		
	92 706F	- sign	
5	26 6L		
	92 642F	+ sign	
6	50 19L	1 in Q	
	75 17L	x 10	
7	L5 2F		$10^n \times 2^{-39}$
	L0 18L		
8	40 2F		to 1
	32 6L		
9	S5 F		
	40 1F		
10	L7 F		Roundoff
	50 L		
11	66 1F		
	75 17L	x 10	
12	00 36F		Print one character
	82 4F		
13	10 40F		Arrange to print n characters
	L5 2F		
14	L4 19L		
	42 2F		
15	32 11L		Spaces
	92 961F		
16	36 F		Waste
	22 F		
17	00 F		10×2^{-39}
	00 10F		

LOCATION	ORDER	NOTES
18	00 LF 00 LF	Unit of double count
19	80 F 00 LF	Unit of count