

UNIVERSITY OF ILLINOIS

DIGITAL COMPUTER

ILLINOIS CODE 55 - PL

**TITLE** Zero Suppression Integer Print (DOI or SADOI)  
**TYPE** Closed with one program parameter  
**NUMBER OF WORDS** 27  
**TEMPORARY STORAGE** 4 words at 0, 1, 2, 3  
**DURATION** Punching Time  
**READ AROUND** Negligible  
**PARAMETERS** The routine is called into use by

p	50 nF	or	70 nF
	50 pF		50 pF
p+1	26 --F		26 --R

according as a sign is or is not desired.

**DESCRIPTION**

This routine will print the contents of  $R_1$  as an integer with or without a sign to  $n$  places where  $2 \leq n \leq 11$ . Zeros will be suppressed on the left unless the number is zero, when the last zero is printed. One space is punched after the number. If more spaces are desired when  $n < 11$ , it is only necessary to increase  $n$ .

RT: 1/23/59
DATE <u>October 16, 1952</u>
CODED BY <u>D.J. Wheeler</u>
APPROVED BY <u>J.P. Nash</u>

LOCATION	ORDER		NOTES	PAGE 1
0	00 K(P4) 40 F 41 2F		Store N Clear 2F	
1	S5 F 46 2F		Set up link and count	
2	L4 26L 42 23L			
3	36 6L L5 F			
4	32 5L 92 706F		- sign	
5	26 6L 92 642F	From 5L	+ sign	
6	50 26L 75 24L	From 3L From 8L		
7	L5 2F L0 25L		Generate $10^n \times 2^{-39}$	
8	40 2F 32 6L			
9	L4 26L 42 2F			
10	S5 F 40 1F			
11	19 38F 40 3F			
12	L7 F 50 L		Roundoff	
13	66 1F 75 24L	From 10	$ N /10^n$ to Q Multiply by 10	
14	L0 3F 32 16L		Test for zero If $\neq 0$ , to print	
15	00 1F 92 961F		Shift left 1 and punch a space	
16	26 19L L4 3F	From 14	Add back $2^{-39}$	
17	00 36F		Shift 36	

LOCATION	ORDER		NOTES	PAGE 2	P 4
18	82 4F 10 40F 41 3F		Punch 1 character and shift 4 Shift back 40 Clear 3F to 0		
19	L5 2F L4 26L	From 16	Count		
20	42 2F 32 13L		Reenter loop if next to last step		
21	75 24L 00 36F		Last step always Punch		
22	82 4F 92 961F		Punch 1 character (last) Space		
23	32 23L 22 ( )F	By 2L	Waste order Link		
24	00 F 00 10F				
25	00 1F 00 1F				
26	80 F 00 1F				