

UNIVERSITY OF ILLINOIS

DIGITAL COMPUTER

AUXILIARY

LIBRARY ROUTINE CO 1 - 110

TITLE: Post Mortem for Fractions and their locations
Displayed on a Cathode Ray Tube (Bootstrap Loading)

TYPE: Post Mortem

NUMBER OF WORDS: 63

MEMORY LOCATIONS: 961 - 1023

TEMPORARY STORAGE: 0, 1, 2

DURATION: About 7 seconds per frame

READ AROUND: 40

DESCRIPTION: This program will display selected sets of ten consecutive signed 12-place decimal fractions preceded by the last decimal digit of their locations. Should the number be zero, a carriage return and line feed is done and the number is not displayed. Each set is selected by reading in a two-digit decimal number representing one tenth the location of the first number to be displayed. After the program has been read in it will stop. A tape containing any of the two digit decimal numbers 00, 01, ..., 95 should then be placed in the reader. (Note: The machine copy of this program has at the end of it all the numbers from 00 to 95). When the machine is started again it will read in the first two digit number and start displaying the locations and decimal fractions in the 10 consecutive locations beginning with the decimal locations which is ten times the number read in. The machine will stop after displaying one frame and if more frames are desired the black switch should be placed on stop disable.

A different set of fractions may be displayed if, after the machine has stopped with the black switch in the center position, the white switch is raised to the top position and then returned to the bottom position. A new two digit number will then be read, and a new set of fractions displayed in the same manner as before.

RT: 3/7/60
DATE <u>August 14, 1953</u>
CODED BY <u>D. E. Muller</u>
APPROVED BY <u>J. P. Nash</u>

ns

LOCATION	ORDER	NOTES	PAGE 1	CO 1
0	80 028			
	40 001			
1	80 028			
	40 002			
2	19 026			
	26 000	Bootstrap		
1	80 028			
	40 000			
0	L4 001			
	40 001			
1	80 028			
	40 3N0			
3N1	81 004			
	40 000			
3N2	81 004	Place location of 1st fraction		
	50 000	in 3J1		
3N3	74 3JJ			
	75 3JJ			
3N4	S5 000			
	40 3J1			
3N5	L5 3JL	Begin new page of printing		
	40 3FO			
3N6	43 3JF			
	L5 3FO			
3N7	L0 3F1	Carriage return and line feed		
	40 3FO			
3N8	40 3L1			
	L5 3JF			
3N9	L4 3J1	Locate fraction		
	42 3NS			
3NK	L5 3JF			
	50 3NK	Print location		
3NS	26 3F3			
	L5 000	Fraction in 2		
3NN	40 002			

LOCATION	ORDER	NOTES	PAGE 2	CO 1
	L3 002			
3NJ	32 3J9			
	L5 3L1			
3NF	L4 3L3	Form a space		
	40 3L1			
3NL	L1 002			
	50 3F6			
3JO	36 3J1	Should we print + or -?		
	J0 3N1			
3J1	L5 3JJ			
	S4 001			
3J2	40 000			
	19 00N	Digit counter		
3J3	50 002			
	40 3F2	in 3F2		
3J4	S7 000			
	40 002			
3J5	L5 000			
	50 3J5	Print digit		
3J6	26 3F3			
	50 002			
3J7	75 3JJ	Form new digit		
	40 000			
3J8	L5 3F2			
	L4 3F2	Step digit counter		
3J9	32 3J3			
	19 026			
3JK	L4 3JF	Start next fraction		
	40 3JF			
3JS	L0 3JJ			
	32 3N6			
3JN	24 3N5	Print new frame		
	26 3N1	Start new set		
3JJ	00 000			
	00 00K			
3JF	80 000			

LOCATION	ORDER	NOTES	PAGE 3	CO 1
	00 000			Fraction counter
3JL	LL 000			Margin set and
	00 000			page top
3F0	00 000			
	00 000			Current line
3F1	14 000			
	00 000			Line spacing
3F2	00 000			
	00 000			Digit counter
3F3	L4 3F4			
	42 3F5			Enter subroutine
3F4	L5 3F6			To display a single character
	S4 3L4			
3F5	42 3L0			
	L5 000			Select constant
3F6	40 000			To display character
	41 001			
3F7	L4 000			Should spot be brightened?
	40 000			
3F8	36 3FK			
	L5 3L1			
3F9	L4 001			Brighten spot
	82 010			
3FK	19 005			
	L4 001			
3FS	L0 3L2			go to next spot
	32 3FN			
3FN	L4 3L2			
	40 001			
3FJ	L3 000			Has all character been formed?
	36 3FL			
3FF	L5 000			
	26 3F7			Test next spot
3FL	L5 3L1			
	L4 3L3			Go to next space

LOCATION	ORDER	NOTES	PAGE 4	CO 1
3L0	40 3L1 22 000			
3L1	00 000 00 000		Location of current character	
3L2	0J LFO 00 000		scanning constant	
3L3	00 OFO 00 000		letter spacing	
3L4	7J 060 N1 7NO		0	
3L5	00 03L 80 000		1	
3L6	85 868 N9 8NO		2	
3L7	43 066 NS 620		3	
3L8	3N 408 7L 200		4	
3L9	5L 264 N9 620		5	
3LK	7J 264 N9 600		6	
3LS	03 N44 85 060		7	
3LN	6J 264 N9 6NO		8	
3LJ	0J 264 N9 7NO		9	
3LF	10 21L 08 100		+	
3LL	10 204 08 100		-	
0	24 3N1 00 001		Start program	