

UNIVERSITY OF ILLINOIS
DIGITAL COMPUTER

LIBRARY ROUTINE P 12 - 194

TITLE: Single Column Print (DOI or SADOI)
TYPE: Closed
NUMBER OF WORDS: 13
TEMPORARY STORAGE: 0
ACCURACY: Prints to m decimal digits with approximate round-off.
DURATION: 25 milliseconds per character punched.
PARAMETERS: S 3: 00 F 00 mF
m = number of decimal digits printed.
DESCRIPTION: Using standard subroutine entry, a carriage return and line feed is followed by the contents of the accumulator printed as a sign followed by m decimal digits, the number being partially rounded off before being printed. The number added for round-off will lie between $.36 \times 10^{-m}$ and $.63 \times 10^{-m}$. The following tables shows the round-off as a function of m.

| <u>m</u> | <u>Round-off</u> |
|----------|-----------------------|
| 1 | 0.63×10^{-m} |
| 2 | .39 |
| 3 | .49 |
| 4 | .61 |
| 5 | .38 |
| 6 | .48 |
| 7 | .60 |
| 8 | .37 |
| 9 | .47 |
| 10 | .58 |
| 11 | .36 |

NOTE:

This program has the same features as P - 6 except that a delay has been provided after the carriage return.

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APPROVED BY J. P. Nash

DATE September 12, 1955

REVISED BY Ross Flenner

DATE December 29, 1959

ns

| LOCATION | ORDER | NOTES |
|----------|------------|-------------------------------|
| | 00 K(P12) | |
| 0 | 40 F | Store argument |
| | K5 F | |
| 1 | 42 11L | Set Link |
| | 92 131F | Carriage return and line feed |
| 2 | 92 515F | Delay |
| | L5 F | |
| 3 | 32 4L | Test Sign |
| | 92 708F | Print (-) |
| 4 | 26 5L | |
| | 92 644F | Print (+) |
| 5 | 19 F | Add round-off |
| | L6 F | |
| 6 | 40 F | |
| | 00 3322 | |
| | 0000 0000J | $(\log_2 10)/4$ |
| 7 | 00 F | |
| | 50 3F | |
| 8 | 00 2F | |
| | 7J 569F | Interlude |
| 9 | 00 20F | to determine |
| | 46 568F | round-off |
| 10 | 92 133F | |
| | L5 571F | |
| 11 | 26 93F | |
| | 22 1476N | |
| | 01 6K | |
| 6 | 40 F | |
| | 19 6383 | Set counter |
| 7 | 50 F | |
| | 40 F | |
| 8 | 75 12L | Form and print one |
| | 00 36F | character |
| 9 | 82 4F | |
| | 10 40F | |

| LOCATION | ORDER | NOTES | PAGE 2 | P 12 |
|----------|--------|----------|--------|------|
| 10 | L5 F | | | |
| | L4 F | Count | | |
| 11 | 32 7L | | | |
| | 22 F | Link | | |
| 12 | 00 F | | | |
| | 00 10F | Constant | | |