

RECOMP II USERS' PROGRAM NO. 1053

PROGRAM TITLE: SUBROUTINE INTF(X)

PROGRAM CLASSIFICATION: Subroutine

AUTHOR: J. N. Brooks  
Baird-Atomic, Inc.  
Cambridge, Massachusetts

PURPOSE: Subroutine INTF(X) obtains the integral portion of the floating number X contained in A,R upon entering; the integral portion I(X) is contained in A,R when exiting from the subroutine.

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B/A Subroutine 5004 INTF(X)

SUBROUTINE INTF(X)

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The subroutine uses  $2l_8$  storages, is relocatable, and uses both L and V loops. (The previous contents of L and V are destroyed.) A relocatable tape with matrix is available.

CALLING SEQUENCE:

	FCA X
A	TRA INTF
A +.1	RETURN

Location A is not restricted to either half word.

12/7/60 JNB

B/A PROGRAM 5004

SUBROUTINE INTF(X)

This subroutine obtains the integral portion of a floating number X in floating number form. Let us represent the number X as

$X = F \cdot 2^E$ . The quantity E is examined.

If  $E \leq 0$ ,  $X < 1$  hence F has no integral part.  
 $E \geq 39$ , F is "pure" integral.  
 $0 < E < 39$ , F is part integer, part fraction.

The program examines E, creates a number Q with 1's in its first to E positions. By use of the extract command a comparison of F and Q is made which separates the integer portion of X from F.

