NAME main

PUBLIC \_\_iar\_program\_start

SECTION .data:CONST:NOROOT (2)

n DC32 0xa

r dc32 0x3

quotientdcd 0x0,0x0,0x0

remaindcd 0x0

SECTION .intvec:CODE:NOROOT (2)

\_\_iar\_program\_start

main

ldr r0,n

bl fact ;N! IS FOUND

mov r10,r6 ;r10=n!

ldr r0,r

bl fact ; R! IS FOUND

mov r1,r6 ;r1=r!

ldr r5,n

ldr r8,r

sub r5,r5,r8 ;r5=n-r

mov r0,r5

bl fact ; (N-R)! IS FOUND

mov r5,r6 ;r5=(n-r)!

mul r9,r5,r1 ;r5=r!\*(n-r)!

bl div

stop b stop

fact EOR R6,R6,R6

MOV R6,R0

MOV R4,R6

LOOP SUBS R4,R4,#1

MULNE R7,R6,R4

MOV R6,R7

BNE LOOP

mov PC,LR

divmov r0,r10

mov r1,r9

mov r3,#0

loop

cmp r1,#0

beq err

cmp r0,r1

blt done

add r3,r3,#1

sub r0,r0,r1

b loop

err

mov r3,#0xffffffff

done

ldr r2,=remain

ldr r4,=quotient

str r0,[r2]

str r3,[r4]

movpc,lr

END