;\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

;THIS ROUTINE DIVIDES ONE 32 BIT NUMBER BY A 16 BIT NUMBER

;R7 = LOOP COUNT

;RSLT\_0 = LSB OF DIVIDEND/QUOTIENT

; .

; .

;RSLT\_3 = MSB OF DIVIDEND/QUOTIENT

;R2 = LSB OF DIVISOR

;R3 = MSB OF DIVISOR

;R4 = LSB OF REMAINDER

;R5 = MSB OF REMAINDER

;TEMP\_0 = TEMP. (LSB OF REMAINDER)

;TEMP\_1 = TEMP. (MSB OF REMAINDER)

;\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

DIV\_32BIT:

; CLR C

; MOV R7,#32

; MOV R4,#0

; MOV R5,#0

DIVLOOP\_1A:

; MOV A,RSLT\_0

; RLC A

; MOV RSLT\_0,A

; MOV A,RSLT\_1

; RLC A

; MOV RSLT\_1,A

; MOV A,RSLT\_2

; RLC A

; MOV RSLT\_2,A

; MOV A,RSLT\_3

; RLC A

; MOV RSLT\_3,A

; MOV A,R4

; RLC A

; MOV R4,A

; MOV TEMP\_0,A

; MOV A,R5

; RLC A

; MOV R5,A

; MOV TEMP\_1,A

; MOV A,R4

; SUBB A,R2

; MOV R4,A

; MOV A,R5

; SUBB A,R3

; MOV R5,A

; CPL C

; JC DROP\_1A

; MOV A,TEMP\_0

; MOV R4,A

; MOV A,TEMP\_1

; MOV R5,A

DROP\_1A:

; DJNZ R7,DIVLOOP\_1A

; MOV A,RSLT\_0

; RLC A

; MOV RSLT\_0,A

; MOV A,RSLT\_1

; RLC A

; MOV RSLT\_1,A

; MOV A,RSLT\_2

; RLC A

; MOV RSLT\_2,A

; MOV A,RSLT\_3

; RLC A

; MOV RSLT\_3,A

; RET