shmult push SR ;save state

 push R5

 push R6

 push R7

 push R8

 push R9

 mov 14(SP),R5 ;A multiplier

 mov 16(SP),R6 ;B multiplicand

 clr R7 ;R7 for sum

 mov #0x0001,R9 ;the mask for testing

 mov #8,R8

tol dec R8 ;loop 7 times

 jeq done

 bit R9,R5 ;test bit of multiplier

 jz nxbit ;jump if zero

 add R6,R7

nxbit clrc ;prep to rotate

 rlc R9 ;rotate mask

 rlc R6 ;multiplicand x2

 jmp tol

done mov R716(SP)

 pop R9

 pop R8

 pop R7

 pop R6

 pop R5

 pop SR

 rtn

mov 16(SP),R6 ;B multiplicand