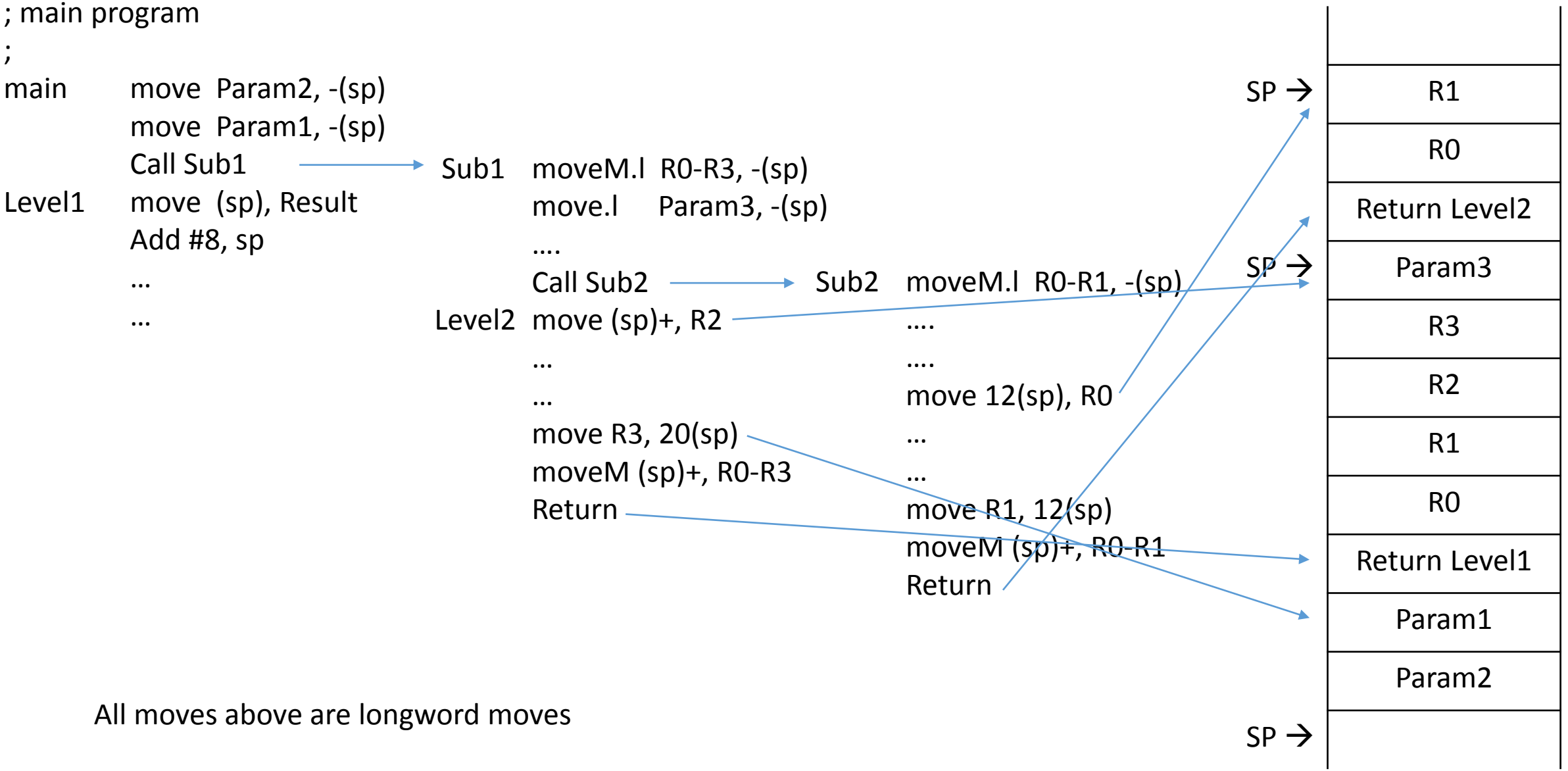


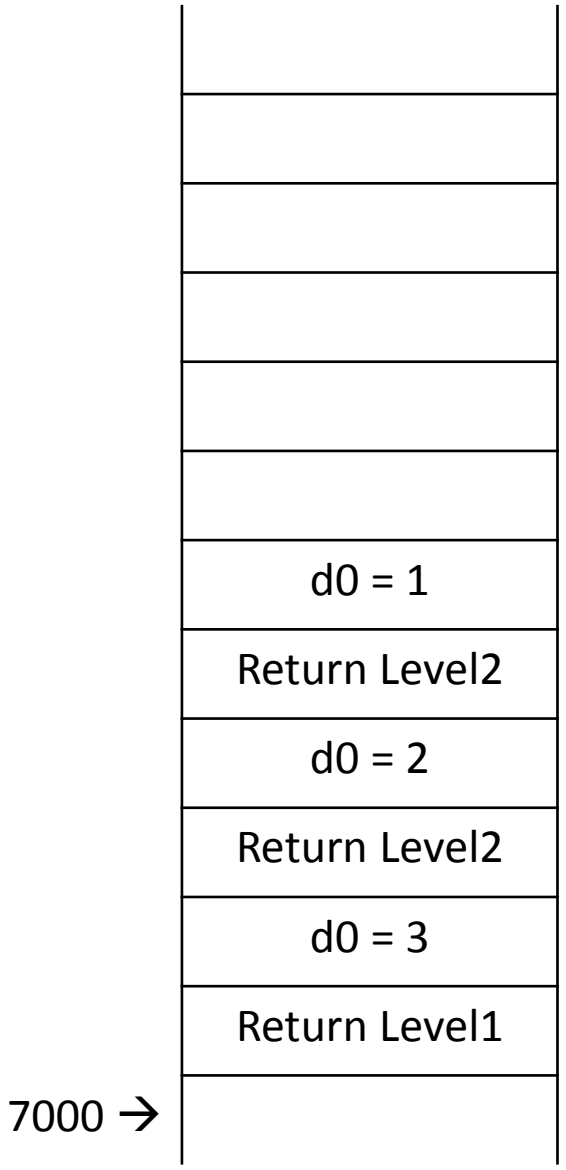
All moves above are longword moves

```
; Recursive Subroutine FACTOR
;
data      equ $6000
program   equ $4000
stack     equ $7000

          org data
number    dc.w    3
result    ds.w    1
          org program
main      movea.w #stack, sp
          move.w  number, d0
          bsr     FACTOR
Level1    move.w  d0, result
          move.w  #228, d7
          trap #14

FACTOR    move.w  d0, -(sp)
          subq.w  #1, d0
          bne     push
          move.w  (sp)+, d0
          bra     return
push      bsr     FACTOR
Level2    mulu    (sp)+, d0
return    rts

          end
```



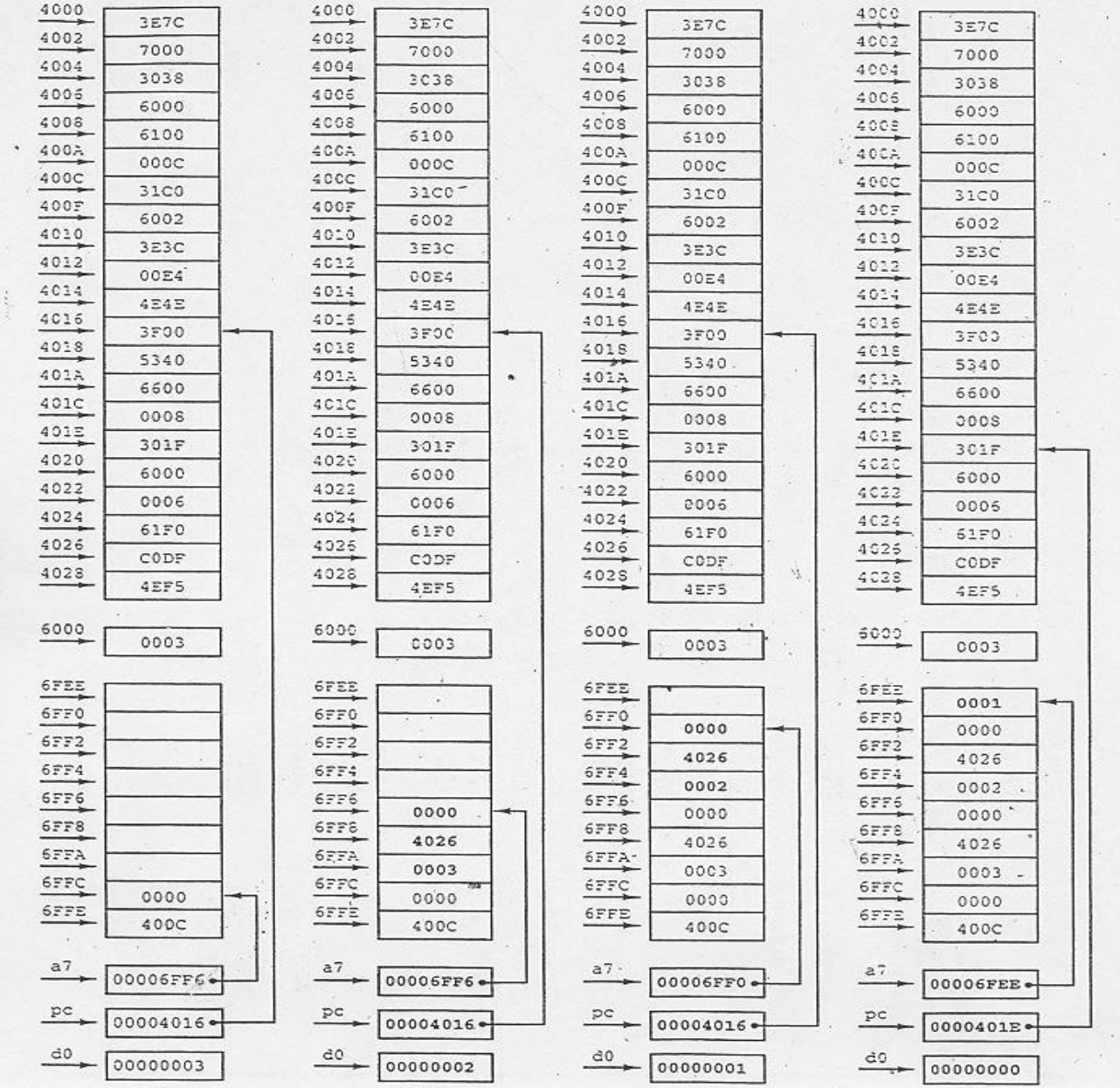


Figure 8.6 Tracing recursive routine `factor`.

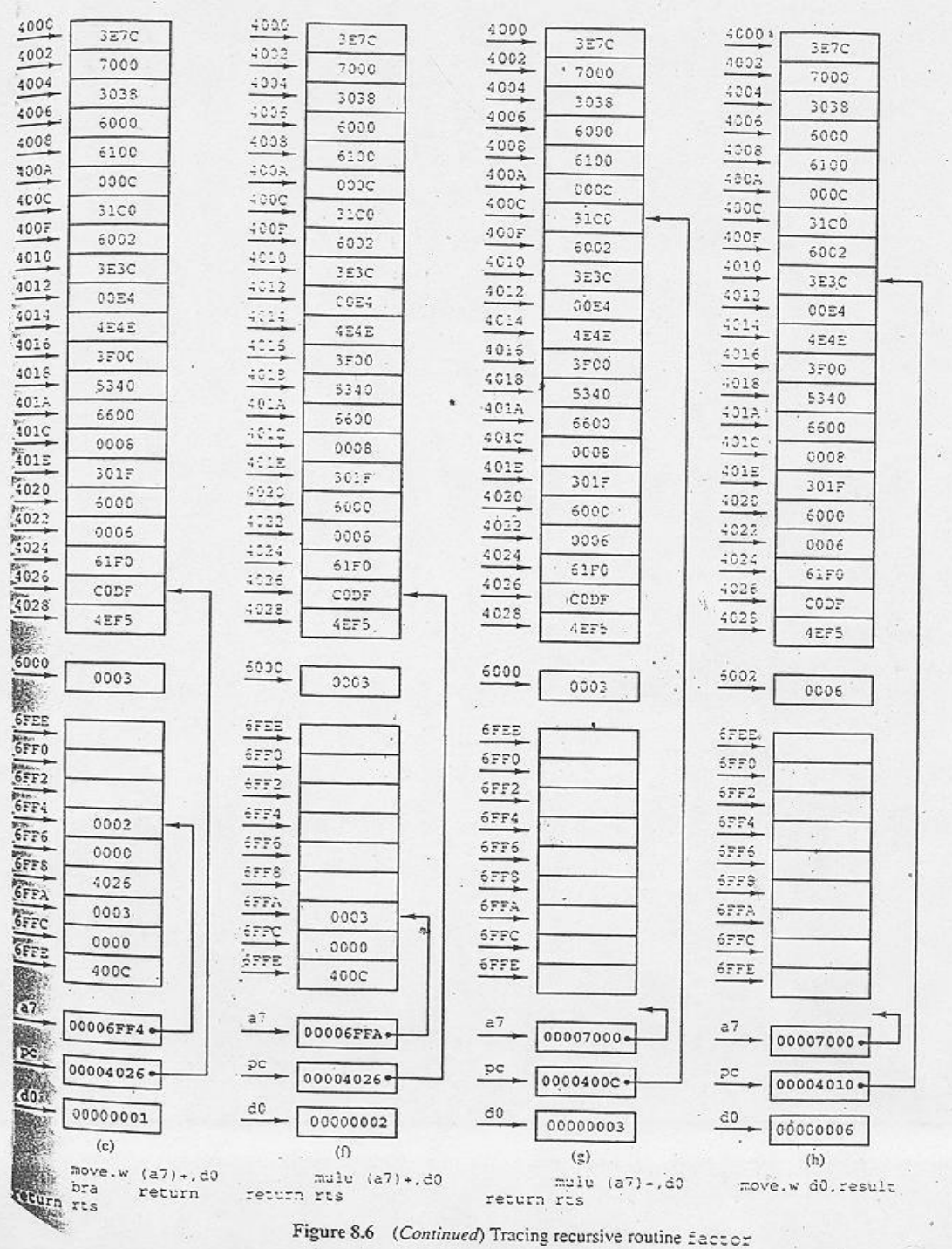


Figure 8.6 (*Continued*) Tracing recursive routine `factor`