Key to Practical 2
Space Invaders (Part 5)

Step 1

```
ClearScreen         ; Save registers on the stack.
                    move.l  d0,-(a7)

                    ; Fill the memory video with zeros.
                    moveq.l #0,d0
                    jsr     FillScreen

                    ; Restore registers from the stack and return from subroutine.
                    move.l  (a7)+,d0
                    rts
```

Step 2

```
BufferToScreen      ; Save registers on the stack.
                    movem.l d7/a0/a1,-(a7)

                    ; Video buffer -> A0.L
                    lea     VIDEO_BUFFER,a0

                    ; Video memory -> A1.L
                    lea     VIDEO_START,a1

                    ; Number of iterations - 1 -> D7.W (because DBRA)
                    ; Number of iterations = Number of long words
                    move.w  #VIDEO_SIZE/4-1,d7

\loop               ; Copy a long word from the buffer into the video memory.
                    move.l  (a0),(a1)+

                    ; Clear the long word (in the buffer) that has just been copied.
                    clr.l   (a0)+

                    ; Branch to loop as long as there are long words to copy.
                    dbra    d7,\loop

                    ; Restore registers from the stack and return from subroutine.
                    movem.l (a7)+,d7/a0/a1
                    rts
```

Step 3

```
PrintSprite         ; Save registers on the stack.
                    movem.l d1/d2/a0,-(a7)

                    ; If the sprite must be hidden, branch to quit.
                    cmp.w   #HIDE,STATE(a1)
                    beq     \quit

                    ; Display the sprite.
                    move.w  X(a1),d1
                    move.w  Y(a1),d2
                    movea.l BITMAP1(a1),a0
                    jsr     PrintBitmap

\quit               ; Restore registers from the stack and return from subroutine.
                    movem.l (a7)+,d1/d2/a0
                    rts
```