Program 1 (SIC, revised version):

```
          LDA   ZERO
          STA   IDX          ; IDX = 0
          LDA   ONE
          STA   I            ; i = 1

OUTER_LOOP:
          LDA   ONE
          STA   J            ; j = 1

INNER_LOOP:
          LDA   I
          MUL   J
          LDX   IDX
          STA   TABLE,X      ; TABLE[IDX] = i*j
          LDA   IDX
          ADD   THREE
          STA   IDX          ; IDX+=3
          LDA   J
          ADD   ONE
          STA   J            ; j++
          COMP  LIMIT
          JLT   INNER_LOOP   ; if j<10 then continue

          LDA   I
          ADD   ONE
          STA   I            ; i++
          COMP  LIMIT
          JLT   OUTER_LOOP   ; if i<10 then continue

I         RESW 1
J         RESW 1
IDX       RESW 1
TABLE     RESW 81
ZERO      WORD 0
ONE       WORD 1
THREE     WORD 3
LIMIT     WORD 10
```

Program 2 (SIC/XE):

```
          LDX   #0          ; X (= IDX) = 0
          LDS   #1          ; S (= i) = 1

OUTER_LOOP:
          LDT   #1          ; T (= j) = 1

INNER_LOOP:
          RMO   T,A
          MULR  S,A
          STA   TABLE,X     ; TABLE[X] = S*T
          LDA   #3
          ADDR  A,X         ; X+=3
          LDA   #1
          ADDR  A,T         ; T++
          RMO   T,A
          COMP  #10
          JLT   INNER_LOOP  ; if T<10 then continue

          LDA   #1
          ADDR  A,S         ; S++
          RMO   S,A
          COMP  #10
          JLT   OUTER_LOOP  ; if S<10 then continue

TABLE     RESW 81
```

Comparison Tables

Program 1:

Instruction	Size (Bytes)	Memory Accesses (excluding fetch)
LDA ZERO	3	1
STA IDX	3	1
LDA ONE	3	1
STA I	3	1
LDA ONE	3	1
STA J	3	1
LDA I	3	1
MUL J	2	1
LDX IDX	3	1
STA TABLE,X	3	1
LDA IDX	3	1
ADD THREE	3	1
STA IDX	3	1
LDA J	3	1
ADD ONE	3	1
STA J	3	1
COMP LIMIT	3	1
JLT INNER_LOOP	3	0
LDA I	3	1
ADD ONE	3	1
STA I	3	1
COMP LIMIT	3	1
JLT OUTER_LOOP	3	0
Total	**69**	$4 + 9 \cdot (6 + 9 \cdot 11) = 949$

Program 2:

Instruction	Size (Bytes)	Memory Accesses (excluding fetch)
LDX #0	3	0
LDS #1	3	0
LDT #1	3	0
RMO T,A	2	0
MULR S,A	2	0
STA TABLE,X	3	1
LDA #3	3	0
ADDR A,X	2	0
LDA #1	3	0
ADDR A,T	2	0
RMO T,A	2	0
COMP #10	3	0
JLT INNER_LOOP	3	0
LDA #1	3	0
ADDR A,S	2	0
RMO S,A	2	0
COMP #10	3	0
JLT OUTER_LOOP	3	0
Total	**47**	**81**