

```
0010: 0000          CALCUL ORG  $0000  POCKET CALCULATOR PROGRAM
0020:
0030:          * * * THE FOLLOWING PROGRAM IS
0040:          *   A POCKET CALCULATOR
0050:          *
0060:          *   INPUT/OUTPUT IS EITHER TELETYPE
0070:          *   OR KIM KEYBOARD AND DISPLAY
0080:          *
0090:          *   INPUT IS GIVEN BY PRESSING THE
0100:          *   KEYS FOR A DECIMAL NUMBER
0110:          *   FOLLOWED BY A FUNCTIONKEY
0120:          *
0130:          * * * FUNCTIONS:
0140:          *
0150:          *   A = + = ADD NUMBER TO RESULT
0160:          *   B = - = SUBTRACT NUMBER FROM RESULT
0170:          *   C = * = MULTIPLY RESULT BY NUMBER
0180:          *   D = / = DIVIDE RESULT BY NUMBER
0190:          *   E = C = CLEAR INPUT NUMBER
0200:          *   F = A = CLEAR RESULT
0210:          *   AD = R = REMAINDER OF LAST DIVISION
0220:          *   DA = I = NUMBER STORED IN MEMORY
0230:          *   + = C = NUMBER FROM MEMORY
0240:          *   PC = % = CALCULATE PERCENTAGE
0250:          *   GO = C = CLEAR RESULT
0260:          *
0270:          *   THE PROGRAM MAKES USE OF THE
0280:          *   INTEGER CALCULATION PACKAGE
0290:          *   'INTCAL' PARTNO 770110.
0300:          *   A 3-BYTE VERSION IS USED.
0310:          *
0320:          *   WHENEVER A DIFFERENT
0330:          *   NUMBER OF BYTES PER
0340:          *   NUMBER IS REQUIRED, THE
0350:          *   DEFINITIONS CONTAINING
0360:          *   SIZE, SIZEA, SIZEB, SIZEC,
0370:          *   ACCU, ACCMSB, ACCLSB,
0380:          *   DACCU, DACLSB AND LOADAD
0390:          *   HAVE TO BE CHANGED TO THE
0400:          *   PROPER VALUE IN RELATION TO
0410:          *   SIZE AND THE PROGRAM MUST BE
0420:          *   REASSEMBLED.
0430:          *
0440:          *   AUTHOR: SIEP DE VRIES
0450:          *   ----- BRUGSTRAAT 32
0460:          *   LIMMEN (NH)
0470:          *   THE NETHERLANDS
0480:          *
0490:          *
0500:          *
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0510:
0520:
0530:
0540: 0000
0550: 0000
0560: 0000
0570: 0000
0580: 0000
0590: 0000
0600: 0000
0610:
0620:
0630:
0640: 0000
0650: 0000
0660: 0000
0670: 0000
0680: 0000
0690: 0000
0700: 0000
0710:
0720:
0730:
0740: 0000
0750: 0000
0760: 0000
0770: 0000
0780: 0000
0790: 0000
0800: 0000
0810: 0000
0820: 0000
0830: 0000
0840: 0000
0850:
0860:
0870:
0880: 0000 D8
0890: 0001 78
0900: 0002 A9 00
0910: 0004 8D FE 07
0920: 0007 8D FA 17
0930: 000A A9 1C
0940: 000C 8D FF 17
0950: 000F 8D FB 17
0960: 0012 A0 00
0970: 0014 A2 74
0980: 0016 20 13 03
0990: 0019 A2 7A
1000: 001B 20 27 03

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*
* * * DEFINITIONS:
*
SIZE * $0003
SIZEA * SIZE -01 ; SIZE - 1
SIZEB * SIZE +03 ; SIZE * 2
SIZEC * SIZE +02 ; SIZE * 2 - 1
PIADAT * $1740 ; PIA TO TEST KIM/TTY
INITRP * $17FE ; INTERRUPT BREAK TRAP
NMITRP * $17FA ; NON-MASKABLE INTERRUPT TRAP
*
* * * GENERAL SUBROUTINES:
*
SCANDS * $1F1F ; DISPLAY DATA ON LED DISPLAY
GETKEY * $1F6A ; READ DATA FROM HEX KEYPAD
DUTCH * $1EA0 ; PRINT CHARACTER ON TTY
GETCH * $1E5A ; READ CHARACTER FROM TTY
CRLF * $1E2F ; PRINT CARRIAGE RETURN/LINE
PRIBYT * $1E3B ; PRINT BYTE AS 2 DIGITS
MONITR * $1C00
*
* * * CHARACTER SET
*
PLUS * $002B
MIN * $002D
MAAL * $002A
DEEL * $002F
CLRNUM * $0043
CLRALL * $0041
REP * $0052
MEMIN * $0049
MEMOUT * $004F
PRCNT * $0025
VRAAG * $003F
*
* START OF PROGRAM
*
START CLD ; INITIALIZE
SEI
LDAIM MONITR
STA INITRP
STA NMITRP
LDAIM MONITR /
STA INITRP +01
STA NMITRP +01
LDYIM $00 ; RESULT AND
LDXIM NULL ; MEMORY ARE BOTH
JSR LOAD ; ZERO
LDXIM MEMRY
JSR STORE

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```

1010: 001E 20 00 02 GETINP JSR INPUT ; READ NUMBER + FUNCTION
1020: 0021 A2 F9 WEDER LDXIM DATA ; ADDRESS OF
1030: 0023 A0 00 LDYIM #00 ; OPERAND
1040: 0025 C9 2B CMPIM PLUS
1050: 0027 D0 05 BNE NOADD
1060: *
1070: 0029 20 35 03 JSR ADD ; ADD OPERAND
1080: 002C B0 40 BCS PROBLM ; CARRY SET IN ERROR
1090: 002E C9 2D NOADD CMPIM MIN
1100: 0030 D0 05 BNE NOMIN
1110: *
1120: 0032 20 47 03 JSR SUB ; SUBTRACT OPERAND
1130: 0035 B0 37 BCS PROBLM ; CARRY CLEAR IS ERROR
1140: 0037 C9 2A NOMIN CMPIM MAAL
1150: 0039 D0 05 BNE NOMAAL
1160: *
1170: 003B 20 5F 03 JSR MPY ; MULTIPLY OPERAND
1180: 003E B0 2E BCS PROBLM ; CARRY SET IS ERROR
1190: 0040 C9 2F NOMAAL CMPIM DEEL
1200: 0042 D0 05 BNE NODEEL
1210: *
1220: 0044 20 AC 03 JSR DVI ; DIVIDE BY OPERAND
1230: 0047 B0 25 BCS PROBLM ; CARRY CLEAR IS ERROR
1240: 0049 C9 41 NODEEL CMPIM CLRALL
1250: 004B D0 05 BNE NOCLER
1260: 004D A2 74 CLEAR LDXIM NULL
1270: 004F 20 13 03 JSR LOAD ; JUST LOAD ZERO
1280: 0052 C9 25 NOCLER CMPIM PRCNT
1290: 0054 D0 0C BNE NOPER
1300: *
1310: 0056 20 5F 03 JSR MPY ; MULTIPLY BY
1320: 0059 B0 13 BCS PROBLM ; PERCENTAGE
1330: 005B A2 77 LDXIM EENHON
1340: *
1350: 005D 20 AC 03 JSR DVI ; DIVIDE BY
1360: 0060 B0 0C BCS PROBLM ; ONE HUNDRED
1370: *
1380: 0062 C9 52 NOPER CMPIM REP
1390: 0064 D0 05 BNE NOREP
1400: 0066 A2 85 LDXIM DACCU
1410: 0068 20 17 03 JSR LOAD
1420: 006B 4C 1E 00 NOREP JMP GETINP
1430: 006E 20 A8 02 PROBLM JSR ERROR
1440: 0071 4C 1E 00 JMP GETINP
1450:
1460:
1470:
1480:
1490:
1500:

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1510:
1520:
1530:
1540:
1550: 0074 00      NULL      =      $00
1560: 0075 00      =      $00
1570: 0076 00      =      $00
1580: 0077 00      EENHON   =      $00
1590: 0078 01      =      $01
1600: 0079 00      =      $00
1610: 007A 00      MEMRY    =      $00
1620: 007B 00      =      $00
1630: 007C 00      =      $00
1640: 007D 00      NUMCAR   =      $00
1650: 007E 00      PREV     =      $00
1660: 007F 00      ACCU     =      $00
1670: 0080      ACCMSB  *   ACCU   -03 ; ACCU - SIZE
1680: 0080      ACCLSB  *   ACCU   +03 ; ACCU + SIZE
1690: 0080      DACCU  *   ACCU   +06 ; ACCU + 2 * SIZE
1700: 0080      DACLSB  *   DACCU  +02 ; DACCU + SIZE - 1
1710: 0080      LOADAD *   DACCU  +06 ; DACCU + 2 * SIZE
1720: 0080      ACCSAV *   LOADAD +02
1730: 0080      MULIND *   ACCSAV +01
1740: 0080      MULCNT *   MULIND +01
1750: 0080      COUNT  *   MULCNT +01
1760: 0080      DATA  *   $00F9
1770:
1780: 0200      ORG    $0200
1790:
1800:
1810:
1820:
1830:
1840:
1850:
1860:
1870:
1880:
1890:
1900:
1910:
1920: 0200 A2 F9      INPUT  LDXIM DATA      ; PERFORM OUTPUT
1930: 0202 A0 00      LDYIM  $00             ; FIRST
1940: 0204 20 27 03      JSR    STORE
1950: 0207 20 92 02      WERONP JSR    OUTPUT
1960: 020A A9 00      LDAIM  $00             ; CLEAR DIGIT-
1970: 020C 85 7D      STA   NUMCAR          ; COUNTER
1980: 020E 20 71 02      WERINP JSR    INCHAR    ; READ NEXT CHARACTER
1990: 0211 C9 43      CMPIM  CLRNUM         ; CLEAR NUMBER
2000: 0213 F0 EB      BEQ   INPUT          ; RE-DISPLAY RESULT

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2010: 0215 C9 49          CMPIM MEMIN
2020: 0217 D0 0F          BNE  NOMEMI
2030: 0219 A5 F9          LDA  DATA          ; MEMORY IN
2040: 021B 85 7A          STA  MEMRY          ; DISPLAY NUMBER
2050: 021D A5 FA          LDA  DATA +01
2060: 021F 85 7B          STA  MEMRY +01
2070: 0221 A5 FB          LDA  DATA +02
2080: 0223 85 7C          STA  MEMRY +02
2090: 0225 4C 07 02      JMP  WERONP
2100: 0228 C9 4F          NOMEMI CMPIM MEMOUT ; NUMBER COMES
2110: 022A D0 0F          BNE  TESDEC        ; FROM MEMORY
2120: 022C A5 7A          LDA  MEMRY          ; DISPLAY IT
2130: 022E 85 F9          STA  DATA
2140: 0230 A5 7B          LDA  MEMRY +01
2150: 0232 85 FA          STA  DATA +01
2160: 0234 A5 7C          LDA  MEMRY +02
2170: 0236 85 FB          STA  DATA +02
2180: 0238 4C 07 02      JMP  WERONP
2190: 023B C9 30          TESDEC CMPIM '0
2200: 023D 10 01          BPL  GODEC
2210: 023F 60          NODEC RTS          ; LEAVE CHARACTER UNKNOWN
2220: 0240 C9 3A          GODEC CMPIM $3A
2230: 0242 10 FB          BPL  NODEC
2240: 0244 A6 7D          LDY  NUMCAR        ; IT IS DECIMAL
2250: 0246 D0 08          BNE  NOTFRS
2260: 0248 A0 00          LDYIM $00         ; FIRST DIGIT CLEARS
2270: 024A 84 F9          STY  DATA         ; NUMBER
2280: 024C 84 FA          STY  DATA +01
2290: 024E 84 FB          STY  DATA +02
2300: 0250 38          NOTFRS SEC
2310: 0251 E9 30          SBCIM '0          ; OBTAIN VALUE
2320: 0253 2A          ROLA              ; DIGIT LEFT POSITIONED
2330: 0254 2A          ROLA              ; IN ACCUMULATOR
2340: 0255 2A          ROLA
2350: 0256 2A          ROLA
2360: 0257 A2 04          LDXIM $04
2370: 0259 2A          ROLWER ROLA      ; SHIFT DIGIT IN
2380: 025A 26 F9          ROL  DATA
2390: 025C 26 FA          ROL  DATA +01
2400: 025E 26 FB          ROL  DATA +02
2410: 0260 CA          DEX
2420: 0261 D0 FE          BNE  ROLWER
2430: 0263 EE 7D          INC  NUMCAR
2440: 0265 A5 7D          LDA  NUMCAR
2450: 0267 C9 07          CMPIM $07        ; TEST IF TOO MANY DIGITS
2460: 0269 30 A3          BMI  WERINP
2470: 026B 20 A8 02      JSR  ERROR
2480: 026E 4C 00 02      JMP  INPUT
2490:
2500:

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2510:
2520:
2530:
2540:
2550:
2560: 0271 A9 01      INCHAR LDAIM $01
2570: 0273 2C 40 17      BIT   PIADAT      ; TEST IF KIM
2580: 0276 F0 16      BEQ   TTYIN
2590: 0278 20 1F 1F      PUNTA JSR   SCANDS  ; WAIT FOR NO KEY
2600: 027B D0 FB      BNE   PUNTA
2610: 027D 20 1F 1F      PUNTB JSR   SCANDS  ; WAIT FOR A KEY
2620: 0280 F0 FB      BEQ   PUNTB
2630: 0282 20 6A 1F      JSR   GETKEY
2640: 0285 C9 15      CMPIM $15      ; IGNORE IT IF
2650: 0287 10 EF      BPL   PUNTA      ; BOUNCE
2660: 0289 AA      TAX
2670: 028A BD FD 03      LDAAX ASCTAB    ; CONVERT TO ASCII
2680: 028D 60      RTS
2690: 028E 20 5A 1E      TTYIN JSR   GETCH    ; TTY IS EASIER
2700: 0291 60      RTS
2710:
2720:
2730:
2740:
2750: 0292 A9 01      OUTPUT LDAIM $01
2760: 0294 2C 40 17      BIT   PIADAT
2770: 0297 F0 01      BEQ   ITSTTY
2780: 0299 60      RTS
2790: 029A A2 02      ITSTTY LDXIM $02
2800: 029C B5 F9      WTYP   LDAAX DATA
2810: 029E 20 3B 1E      JSR   PRIBYT
2820: 02A1 CA      DEX
2830: 02A2 10 FB      BPL   WTYP
2840: 02A4 20 2F 1E      OUTYP JSR   CRLF
2850: 02A7 60      RTS
2860:
2870:
2880:
2890: 02A8 A9 01      ERROR  LDAIM $01
2900: 02AA 2C 40 17      BIT   PIADAT
2910: 02AD F0 0A      BEQ   TTYERR
2920: 02AF A2 02      LDXIM $1EA
2930: 02B1 A9 FF      LDAIM $FF
2940: 02B3 95 7F      SETFUL STAAX ACCU
2950: 02B5 CA      DEX
2960: 02B6 10 FB      BPL   SETFUL
2970: 02B8 60      RTS
2980: 02B9 A9 3F      TTYERR LDAIM VRAAG
2990: 02BB 20 A0 1E      JSR   OUTCH
3000: 02BE 4C A4 02      JMP   OUTYP

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3010: 0300          ORG    $0300
3020:              * * * INTEGER PACKAGE 'INTCAL'
3030:              *      #770110
3040:              *
3050:              *      COPYRIGHT (C) 1977, 1982
3060:              *      WESTVRIES COMPUTER CONSULTING B.V.
3070:              *      P.O. BOX 20
3080:              *      OOSTZAAN
3090:              *      THE NETHERLANDS
3100:              *
3110:              * * * FUNCTIONS PROVIDED:
3120:              *      LOAD, STORE, ADD, SUBTRACT,
3130:              *      MULTIPLY, DIVIDE
3140:              *
3150: 0300 86 8B    BEGALG STX   LOADAD      ; GENERAL SETUP AND
3160: 0302 84 8C          STY   LOADAD +01 ; INITIALIZE
3170: 0304 85 8D          STA   ACCSAV
3180: 0306 A2 02          LDXIM SIZEA
3190: 0308 A0 00          LDYIM $00
3200: 030A 94 82    CLRWER STYZX ACCLSB
3210: 030C CA          DEX
3220: 030D 10 FB          BPL   CLRWER
3230: 030F A2 02          LDXIM SIZEA
3240: 0311 F8          SED
3250: 0312 60          RTS
3260: 0313 20 00 03    LOAD   JSR   BEGALG      ; LOAD INTO
3270: 0316 B1 8B    NLOAD  LDAIY LOADAD      ; ACCU
3280: 0318 99 7F 00          STAA Y ACCU
3290: 031B C8          INY
3300: 031C CA          DEX
3310: 031D 10 F7          BPL   NLOAD
3320: 031F D8          ALGOUT CLD          ; GENERAL EXIT
3330: 0320 A6 8B          LDX   LOADAD      ; RESTORE REGISTERS
3340: 0322 A4 8C          LDY   LOADAD +01
3350: 0324 A5 8D          LDA   ACCSAV
3360: 0326 60          RTS
3370: 0327 20 00 03    STORE  JSR   BEGALG      ; STORE FROM
3380: 032A B9 7F 00    NSTOR  LDAAY ACCU      ; ACCU
3390: 032D 91 8B          STAIY LOADAD
3400: 032F C8          INY
3410: 0330 CA          DEX
3420: 0331 10 F7          BPL   NSTOR
3430: 0333 30 EA          BMI   ALGOUT
3440: 0335 20 00 03    ADD    JSR   BEGALG      ; ADD INTO
3450: 0338 18          CLC          ; ACCU
3460: 0339 B9 7F 00    NADD  LDAAY ACCU
3470: 033C 71 8B          ADCIY LOADAD
3480: 033E 99 7F 00          STAA Y ACCU
3490: 0341 C8          INY
3500: 0342 CA          DEX

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| | | | | | | | | |
|-------|------|----|----|----|--------|--------|--------|-----------------|
| 3510: | 0343 | 10 | F4 | | BPL | NADD | | |
| 3520: | 0345 | 30 | D8 | | BMI | ALGOUT | | |
| 3530: | 0347 | 20 | 00 | 03 | SUB | JSR | BEGALG | ; SUBTRACT FROM |
| 3540: | 034A | 38 | | | | SEC | | ; ACCU |
| 3550: | 034B | B9 | 7F | 00 | NSUB | LDAAY | ACCU | |
| 3560: | 034E | F1 | 8B | | | SBCIY | LOADAD | |
| 3570: | 0350 | 99 | 7F | 00 | | STAAY | ACCU | |
| 3580: | 0353 | C8 | | | | INY | | |
| 3590: | 0354 | CA | | | | DEX | | |
| 3600: | 0355 | 10 | F4 | | BPL | NSUB | | |
| 3610: | 0357 | B0 | 03 | | | BCS | CLICAR | |
| 3620: | 0359 | 38 | | | SETCAR | SEC | | |
| 3630: | 035A | B0 | C3 | | | BCS | ALGOUT | |
| 3640: | 035C | 18 | | | CLICAR | CLC | | |
| 3650: | 035D | 90 | C0 | | | BCC | ALGOUT | |
| 3660: | 035F | 86 | 8B | | MPY | STX | LOADAD | |
| 3670: | 0361 | 84 | 8C | | | STY | LOADAD | +01 |
| 3680: | 0363 | 85 | 8D | | | STA | ACCSAV | |
| 3690: | 0365 | A2 | 06 | | | LDXIM | SIZEB | |
| 3700: | 0367 | B5 | 7E | | WIMPY | LDAAX | ACCU | -01 |
| 3710: | 0369 | 95 | 84 | | | STAAX | DACCU | -01 |
| 3720: | 036B | A9 | 00 | | | LDAIM | \$00 | |
| 3730: | 036D | 95 | 7E | | | STAAX | ACCU | -01 |
| 3740: | 036F | CA | | | | DEX | | |
| 3750: | 0370 | D0 | F5 | | | BNE | WIMPY | |
| 3760: | 0372 | A8 | | | | TAY | | |
| 3770: | 0373 | A9 | 03 | | | LDAIM | SIZE | |
| 3780: | 0375 | 85 | 8F | | | STA | MULCNT | |
| 3790: | 0377 | F8 | | | | SED | | |
| 3800: | 0378 | B1 | 8B | | OUTLUP | LDAIY | LOADAD | |
| 3810: | 037A | 85 | 8E | | | STA | MULIND | |
| 3820: | 037C | F0 | 1C | | | BEG | NOAD | |
| 3830: | 037E | 18 | | | PEUTER | CLC | | |
| 3840: | 037F | A9 | 06 | | | LDAIM | SIZEB | |
| 3850: | 0381 | 85 | 90 | | | STA | COUNT | |
| 3860: | 0383 | A2 | 00 | | | LDXIM | \$00 | |
| 3870: | 0385 | B5 | 7F | | WERADD | LDAAX | ACCU | |
| 3880: | 0387 | 75 | 85 | | | ADCAX | DACCU | |
| 3890: | 0389 | 95 | 7F | | | STAAX | ACCU | |
| 3900: | 038B | E8 | | | | INX | | |
| 3910: | 038C | C6 | 90 | | | DEC | COUNT | |
| 3920: | 038E | D0 | F5 | | | BNE | WERADD | |
| 3930: | 0390 | B0 | 8D | | ULGO | BCS | ALGOUT | |
| 3940: | 0392 | A5 | 8E | | | LDA | MULIND | |
| 3950: | 0394 | E9 | 00 | | | SBCIM | \$00 | |
| 3960: | 0396 | 85 | 8E | | | STA | MULIND | |
| 3970: | 0398 | D0 | E4 | | | BNE | PEUTER | |
| 3980: | 039A | A2 | 05 | | NOAD | LDXIM | SIZEC | |
| 3990: | 039C | B5 | 84 | | WUSTUR | LDAAX | DACCU | -01 |
| 4000: | 039E | 95 | 85 | | | STAAX | DACCU | |

| | | | | | |
|-------|------|----|-------|--------|----------------|
| 4010: | 03A0 | CA | | DEX | * |
| 4020: | 03A1 | D0 | F9 | BNE | WUSTUR |
| 4030: | 03A3 | 8E | 85 | STX | DACCU |
| 4040: | 03A5 | C8 | | INY | |
| 4050: | 03A6 | C6 | 8F | DEC | MULCNT |
| 4060: | 03A8 | D0 | CE | BNE | OUTLUP |
| 4070: | 03AA | F0 | B0 | PULGO | BEQ CLICAR |
| 4080: | 03AC | 8E | 8B | DVI | STX LOADAD |
| 4090: | 03AE | 84 | 8C | | STY LOADAD +01 |
| 4100: | 03B0 | 85 | 8D | | STA ACCSAV |
| 4110: | 03B2 | A2 | 03 | | LDXIM SIZE |
| 4120: | 03B4 | 8E | 8E | | STX MULIND |
| 4130: | 03B6 | A2 | 05 | | LDXIM SIZEC |
| 4140: | 03B8 | B5 | 7F | MOVDIV | LDAAX ACCU |
| 4150: | 03BA | 95 | 85 | | STAAX DACCU |
| 4160: | 03BC | A9 | 00 | | LDAIM \$00 |
| 4170: | 03BE | 95 | 7F | | STAAX ACCU |
| 4180: | 03C0 | CA | | DEX | |
| 4190: | 03C1 | 10 | F5 | | BPL MOVDIV |
| 4200: | 03C3 | A0 | 02 | DIVLUP | LDYIM SIZEA |
| 4210: | 03C5 | A6 | 8E | | LDX MULIND |
| 4220: | 03C7 | B5 | 87 | TESWER | LDAAX DACLSB |
| 4230: | 03C9 | D1 | 8B | | CMPIY LOADAD |
| 4240: | 03CB | 90 | 29 | | BCC FINDIV |
| 4250: | 03CD | B5 | 87 | | LDAAX DACLSB |
| 4260: | 03CF | F0 | 21 | | BEQ NOCOMP |
| 4270: | 03D1 | A6 | 8E | | LDX MULIND |
| 4280: | 03D3 | A0 | 00 | | LDYIM \$00 |
| 4290: | 03D5 | A9 | 03 | | LDAIM SIZE |
| 4300: | 03D7 | 85 | 8F | | STA MULCNT |
| 4310: | 03D9 | F8 | | | SED |
| 4320: | 03DA | B5 | 85 | DIVRE | LDAAX DACCU |
| 4330: | 03DC | F1 | 8B | | SBCIY LOADAD |
| 4340: | 03DE | 95 | 85 | | STAAX DACCU |
| 4350: | 03E0 | E8 | | | INX |
| 4360: | 03E1 | C8 | | | INY |
| 4370: | 03E2 | C6 | 8F | | DEC MULCNT |
| 4380: | 03E4 | D0 | F4 | | BNE DIVRE |
| 4390: | 03E6 | B5 | 7C | | LDAAX ACCMSB |
| 4400: | 03E8 | C9 | 99 | | CMPIM \$99 |
| 4410: | 03EA | B0 | A4 | | BCS ULGO |
| 4420: | 03EC | 69 | 01 | | ADCIM \$01 |
| 4430: | 03EE | 95 | 7C | | STAAX ACCMSB |
| 4440: | 03F0 | D0 | D1 | | BNE DIVLUP |
| 4450: | 03F2 | CA | | NOCOMP | DEX |
| 4460: | 03F3 | 88 | | | DEY |
| 4470: | 03F4 | 10 | D1 | | BPL TESWER |
| 4480: | 03F6 | C6 | 8E | FINDIV | DEC MULIND |
| 4490: | 03F8 | 10 | C9 | | BPL DIVLUP |
| 4500: | 03FA | 4C | 5C 03 | | JMP CLICAR |

| | | | |
|---------------|----------|---------|------|
| 4510: 03FD 30 | ASCTAB = | '0' | ; 0 |
| 4520: 03FE 31 | = | '1' | ; 1 |
| 4530: 03FF 32 | = | '2' | ; 2 |
| 4540: 0400 33 | = | '3' | ; 3 |
| 4550: 0401 34 | = | '4' | ; 4 |
| 4560: 0402 35 | = | '5' | ; 5 |
| 4570: 0403 36 | = | '6' | ; 6 |
| 4580: 0404 37 | = | '7' | ; 7 |
| 4590: 0405 38 | = | '8' | ; 8 |
| 4600: 0406 39 | = | '9' | ; 9 |
| 4610: 0407 2B | = | PLUS | ; A |
| 4620: 0408 2D | = | MIN | ; B |
| 4630: 0409 2A | = | MAAL | ; C |
| 4640: 040A 2F | = | DEEL | ; D |
| 4650: 040B 43 | = | CLARNUM | ; E |
| 4660: 040C 41 | = | CLRALL | ; F |
| 4670: 040D 52 | = | REP | ; AD |
| 4680: 040E 49 | = | MEMIN | ; DA |
| 4690: 040F 4F | = | MEMOUT | ; PC |
| 4700: 0410 25 | = | PRCNT | ; + |
| 4710: 0411 41 | = | CLRALL | ; GO |