

# Program 1

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1 PRINT "Program 1 is running":PRINT"work
ing on line"
7 ENT =-3,-20:LENT =-4,-120:LENV 2,1,1
5,10,1,-15,12
8 MEMORY 20759
10 valid$="0123456789ABCDEF":ln=1000
20 x=20760
30 FOR y=0 TO 7
40 READ num:IF num$="***" THEN 110
45 IF INSTR(valid$,LEFT$(num$,1)) OR INS
TR (valid$,RIGHT$(num$,1)) THEN num$=V
ALID$(num$)+POKE xty,num ELSE 120
60 chk=chk+num
70 NEXT:ln=ln+10
80 READ check:IF chk<check THEN 130
90 chk=0
95 PRINT ln:CHR$(11)
100 x+=x:GOTO 30
110 PRINT "bytes":xty
115 RUN:program2
120 PRINT "Invalid character in line ";ln
:END
130 PRINT "Checksum error in line ";ln:EN
D
1000 DATA 00,00,00,00,00,00,00,0
1010 DATA 00,00,00,00,00,00,00,0
1020 DATA 00,00,00,00,00,00,00,0
1030 DATA 00,00,00,00,00,00,00,0
1040 DATA 00,00,00,00,00,00,00,0
1050 DATA 00,00,00,00,00,00,00,0
1060 DATA 00,00,00,00,00,00,00,0
1070 DATA 00,00,00,00,00,00,00,0
1080 DATA 00,0C,05,85,83,81,8C,03,59
1090 DATA 03,0F,0F,0F,0F,0F,0F,104
1100 DATA 0E,0F,0E,05,03,0F,0C,94
1110 DATA 07,0F,0F,0F,0F,0F,40,0F,174
1120 DATA 4C,0F,0F,03,23,09,0F,0C,452
1130 DATA 0F,2E,17,0F,23,0F,4F,0F,243
1140 DATA 4C,CC,0C,0C,0F,00,0F,13,721
1150 DATA 4C,6F,2F,00,23,03,CF,0C,491
1160 DATA 00,33,88,00,00,EE,EE,00,665
1170 DATA 11,90,73,00,10,00,FF,00,542
1180 DATA 33,50,71,00,22,20,FB,00,822
1190 DATA 22,50,FB,00,22,20,FB,00,932
1200 DATA 6F,58,33,CC,45,07,00,4C,747
1210 DATA 46,0A,0A,4C,23,85,05,83,347
1220 DATA 77,0A,30,00,47,CF,EE,00,804
1230 DATA 77,0F,2E,00,11,FF,EE,00,490
1240 DATA 00,44,99,00,00,32,AA,00,25
1250 DATA 00,11,CC,00,00,77,FF,00,595
1260 DATA 00,E9,3C,1F,00,00,7F,00,916
1270 DATA 00,CF,1F,88,00,47,1C,00,470
1280 DATA 00,47,1F,00,00,47,3F,00,268
1290 DATA 00,23,2E,00,00,23,2E,00,162
1300 DATA 00,33,6E,00,00,11,4C,00,254
1310 DATA 00,11,4C,00,00,00,00,209
1320 DATA 00,77,EE,00,11,CF,33,00,968
1330 DATA 33,CC,CC,0C,67,CC,0F,0E,1068
1340 DATA 47,0F,3C,2E,CF,0F,3C,3F,537
1350 DATA 0C,0F,0F,7F,FF,FC,33,FF,1344
1360 DATA 00,74,42,00,00,47,0E,00,630
1370 DATA 00,74,42,00,00,5E,02,00,454
1380 DATA 22,50,E2,44,99,74,02,88,1804
1390 DATA 55,1C,FA,AA,33,FF,FF,CC,1515
1400 DATA 00,00,70,00,00,00,42,00,170
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1410 DATA 00,00,42,00,00,70,00,434
1420 DATA 00,00,03,EE,00,00,70,1915
1430 DATA 00,00,70,EE,00,70,70,00,816
1440 DATA 10,70,70,CC,30,70,70,CC,1408
1450 DATA 30,70,70,00,70,FE,70,00,1390
1460 DATA FC,F1,70,00,FC,11,70,00,1594
1470 DATA 70,E2,10,CC,30,70,00,CC,1154
1480 DATA 00,EE,00,00,00,24,00,00,260
1490 DATA 00,24,00,10,70,00,00,292
1500 DATA 70,CC,00,00,70,70,00,00,780
1510 DATA 70,CC,00,00,10,70,00,00,816
1520 DATA 30,70,70,00,30,70,70,CC,1376
1530 DATA 10,70,70,CC,10,70,FF,EE,1415
1540 DATA 00,00,70,70,33,10,70,70,33,1478
1550 DATA 30,00,74,EE,10,10,70,CC,1012
1560 DATA FF,9F,1F,EE,8F,9F,1F,EE,1254
1570 DATA 8F,8F,9F,3F,8F,4F,9F,1F,920
1580 DATA CF,7F,0F,9F,4F,9F,0F,9F,912
1590 DATA 47,9F,0F,0F,47,0F,1F,EE,855
1600 DATA 47,1F,1F,2E,47,1F,3F,2E,390
1610 DATA 47,2F,4F,3F,CF,9F,2F,1F,000
1620 DATA 0F,9F,4F,1F,CF,0F,4F,1F,872
1630 DATA 57,0F,2F,3F,57,2F,2E,20,439
1640 DATA 00,00,00,00,00,01,03,0C,27
1650 DATA 00,03,03,0C,0F,0F,01,0C,47
1660 DATA 07,CC,01,0C,0F,0F,00,0E,269
1670 DATA 07,0C,00,06,01,0F,0C,07,62
1680 DATA 03,0F,0F,03,03,0F,0F,00,0
1690 DATA 01,0F,0F,0F,01,0F,7F,0F,204
1700 DATA 00,0F,0F,0F,01,0F,8F,0F,347
1710 DATA 03,88,0F,0E,20,10,87,0C,363
1720 DATA 01,0C,00,00,05,0C,00,00,36
1730 DATA 03,0C,0C,00,03,00,00,00,61
1740 DATA 07,00,30,0E,07,00,0F,0F,127
1750 DATA 06,00,07,0E,0E,00,0F,00,67
1760 DATA 0C,0F,0F,0C,00,0F,0F,0C,109
1770 DATA 0F,0F,00,0F,0F,0F,00,00,330
1780 DATA 0F,1F,0F,00,0F,1F,0F,00,130
1790 DATA 07,1F,01,0C,05,1E,00,40,276
1800 DATA 00,44,22,00,0E,44,22,07,225
1810 DATA 0F,02,04,2F,00,0A,05,0F,81
1820 DATA 40,09,09,21,00,0A,00,70,483
1830 DATA 70,87,0E,00,30,CF,3F,00,667
1840 DATA 11,EF,7F,00,33,CF,30,CC,1023
1850 DATA 77,CF,30,EE,76,CF,30,EE,1203
1860 DATA FE,00,10,FF,FC,00,10,FF,1284
1870 DATA FC,00,10,FF,FC,00,00,FF,1128
1880 DATA 11,44,22,00,01,4C,23,00,231
1890 DATA 01,0A,05,00,10,0A,05,00,103
1900 DATA 10,00,09,00,10,00,00,00,334
1910 DATA 00,87,1E,00,00,CF,3F,00,435
1920 DATA 11,EF,7F,00,11,CF,39,00,930
1930 DATA 11,C9,39,00,11,C9,39,00,822
1940 DATA 11,C9,31,00,11,C9,30,00,795
1950 DATA 11,00,10,00,11,00,00,00,594
1960 DATA 00,00,00,00,00,00,00,0
1970 DATA 00,00,00,00,00,00,00,0
1980 DATA 00,00,00,00,00,00,00,0
1990 DATA 00,00,00,00,00,00,00,0
2000 DATA 00,00,00,00,00,00,00,0
2010 DATA 00,00,00,00,00,00,00,0
2020 DATA 00,00,00,00,00,00,00,0
2030 DATA 00,00,00,00,00,00,00,0
2040 DATA 00,22,00,22,09,20,0C,44,528
2050 DATA 45,00,0C,0E,01,0C,00,0F,149
2060 DATA 00,0E,00,0F,0E,0F,0E,0A,84
2070 DATA 07,47,2F,7F,CF,2F,4F,0E,599
2080 DATA 87,0F,0F,0E,11,8F,1F,0F,309
2090 DATA 23,0F,0F,0F,0F,0F,0F,0C,259
2100 DATA 87,47,0F,0E,0E,0F,00,00,485
2110 DATA 22,0F,8F,44,44,02,0E,22,362
2120 DATA 00,00,00,00,00,00,00,0
2130 DATA 00,00,00,00,00,00,00,0
2140 DATA 00,00,00,00,00,00,00,0
2150 DATA 00,00,00,00,00,00,00,0
2160 DATA 00,00,00,00,00,00,00,0
2170 DATA 00,00,00,00,00,00,00,0
2180 DATA 00,00,00,00,00,00,00,0
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2190 DATA 00,00,00,00,00,00,00,0
2200 DATA 00,00,00,00,00,00,00,0
2210 DATA 00,00,00,00,00,00,00,0
2220 DATA 00,00,00,00,00,00,00,0
2230 DATA 00,00,00,00,00,00,00,0
2240 DATA 00,00,00,00,00,00,00,0
2250 DATA 0C,19,00,70,7F,33,CF,67,1325
2260 DATA 50,00,00,00,1C,01,00,00,285
2270 DATA 00,0F,0F,FF,FF,43,00,6F,822
2280 DATA 4F,73,65,09,20,44,29,6F,602
2290 DATA 79,73,74,69,63,00,20,6F,800
2300 DATA 72,20,20,40,29,65,79,62,622
2310 DATA 6F,61,72,64,2E,20,20,20,564
2320 DATA 20,20,20,20,55,4F,44,599
2330 DATA 45,4F,4E,45,20,40,4F,44,551
2340 DATA 45,53,54,2E,20,20,20,20,410
2350 DATA 20,20,20,20,20,20,20,20,256
2360 DATA 20,20,20,20,20,20,20,20,256
2370 DATA 20,20,20,20,44,45,46,49,408
2380 DATA 4E,45,09,40,45,59,53,34,530
2390 DATA 20,20,20,20,20,20,20,20,269
2400 DATA 20,20,20,20,20,20,20,20,256
2410 DATA 20,20,20,20,20,20,20,20,256
2420 DATA 20,20,20,20,55,50,20,20,357
2430 DATA 20,3A,20,20,20,20,20,20,295
2440 DATA 20,20,20,20,20,20,20,20,256
2450 DATA 20,20,20,20,20,20,20,20,256
2460 DATA 20,20,20,20,20,20,20,20,256
2470 DATA 20,20,20,20,44,4F,57,4E,440
2480 DATA 20,3A,20,20,20,20,20,20,295
2490 DATA 20,20,20,20,20,20,20,20,256
2500 DATA 20,20,20,20,20,20,20,20,256
2510 DATA 20,20,20,20,20,20,20,20,256
2520 DATA 20,20,20,20,4C,45,46,54,427
2530 DATA 20,3A,20,20,20,20,20,20,295
2540 DATA 20,20,20,20,20,20,20,20,256
2550 DATA 20,20,20,20,20,20,20,20,256
2560 DATA 20,20,20,20,20,20,20,20,256
2570 DATA 20,20,20,20,52,49,47,40,426
2580 DATA 54,3A,20,20,20,20,20,20,347
2590 DATA 20,20,20,20,20,20,20,20,256
2600 DATA 20,20,20,20,20,20,20,20,256
2610 DATA 20,20,20,20,20,20,20,20,256
2620 DATA 20,20,20,20,20,20,20,20,256
2630 DATA 20,20,20,20,41,52,45,20,370
2640 DATA 54,40,45,55,45,20,43,4F,355
2650 DATA 52,52,45,45,54,20,20,59,545
2660 DATA 2F,4E,29,3F,20,20,20,20,357
2670 DATA 20,20,20,20,57,45,4C,436
2680 DATA 20,44,4F,4E,45,21,47,45,499
2690 DATA 50,52,52,45,41,44,59,50,569
2700 DATA 55,53,40,20,53,50,41,63,567
2710 DATA 45,28,54,4F,28,53,54,41,528
2720 DATA 52,54,0A,20,20,20,20,20,336
2730 DATA 53,45,52,45,45,4E,3A,551
2740 DATA 02,02,00,00,00,00,FF,274
2750 DATA FF,0A,02,03,00,00,00,0F,281
2760 DATA FF,FF,0A,02,0A,00,01,00,00,21
2770 DATA 0F,0F,01,02,01,00,01,0E,345
2780 DATA 0F,FF,00,53,43,4F,52,45,638
2790 DATA 5A,20,30,30,30,30,30,30,391
2800 DATA 20,20,20,20,20,20,20,20,256
2810 DATA 20,20,20,20,20,20,20,20,256
2820 DATA 20,20,30,30,20,20,20,20,288
2830 DATA 30,30,20,54,49,49,40,20,463
2840 DATA 3A,20,30,30,30,30,30,30,375
2850 DATA 20,20,20,20,20,20,20,20,256
2860 DATA 20,20,20,20,20,20,20,20,256
2870 DATA 20,20,20,20,20,20,20,20,256
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2880 DATA 20,20,20,00,00,00,00,00,96  
2890 DATA 00,00,01,00,00,00,00,00,81  
2900 DATA 00,00,00,00,00,00,00,20,124  
2910 DATA 20,20,20,20,20,53,50,40,41,432  
2920 DATA 54,43,40,20,20,20,20,20,383  
2930 DATA 20,20,20,20,20,20,20,20,256  
2940 DATA 20,20,20,20,20,20,20,20,256  
2950 DATA 20,20,20,20,20,20,20,20,256  
2960 DATA 20,20,20,20,20,20,20,20,256  
2970 DATA 20,20,20,20,20,20,20,20,256  
2980 DATA 20,20,20,20,20,20,20,20,256  
2990 DATA 20,42,59,20,52,41,42,41,525  
3000 DATA 53,41,44,54,20,20,20,20,444  
3010 DATA 20,20,20,20,20,20,20,20,256  
3020 DATA 20,20,20,20,20,20,20,20,256  
3030 DATA 20,20,20,20,20,20,20,20,256  
3040 DATA 20,20,20,20,20,20,20,20,256  
3050 DATA 20,20,20,20,20,00,00,20,212  
3060 DATA 20,20,20,20,20,20,20,20,256  
3070 DATA 20,20,20,20,20,20,20,41,303  
3080 DATA 50,54,49,41,41,41,53,20,541  
3090 DATA 20,20,20,20,20,20,20,20,256  
3100 DATA 20,20,20,20,20,20,20,20,256  
3110 DATA 20,20,20,20,20,20,20,20,256  
3120 DATA 20,20,20,20,20,20,20,51,319  
3130 DATA 51,51,51,51,51,51,51,20,634  
3140 DATA 20,20,20,20,20,20,20,20,256  
3150 DATA 20,20,20,20,20,20,20,00,234  
3160 DATA 00,00,00,00,20,20,20,20,190  
3170 DATA 20,20,20,20,31,20,30,20,299  
3180 DATA 50,41,41,59,20,54,48,45,567  
3190 DATA 20,47,41,40,45,00,00,00,347  
3200 DATA 00,00,20,20,20,20,20,20,212  
3210 DATA 20,20,20,32,20,30,20,43,335  
3220 DATA 40,41,41,41,47,45,20,45,41,533  
3230 DATA 41,54,52,41,41,41,53,00,00,585  
3240 DATA 00,00,00,20,20,20,20,20,190  
3250 DATA 20,20,20,20,35,20,30,20,300  
3260 DATA 43,48,41,41,41,47,45,20,53,537  
3270 DATA 54,41,52,54,20,53,43,52,579  
3280 DATA 45,45,41,11,11,00,00,00,726  
3290 DATA 00,00,00,00,00,00,00,00,0  
3300 DATA 00,00,00,00,00,00,00,00,0  
3310 DATA 00,00,00,00,00,00,00,00,0  
3320 DATA 00,00,00,00,00,00,00,00,0  
3330 DATA 00,00,00,00,00,00,00,00,0  
3340 DATA 00,00,00,00,00,00,00,00,0  
3350 DATA 00,00,00,00,00,00,00,00,0  
3360 DATA 00,00,00,00,00,00,00,00,0  
3370 DATA 00,00,00,00,00,00,00,04,100  
3380 DATA 00,00,00,00,00,00,00,00,0  
3390 DATA 00,00,00,00,00,00,00,00,0  
3400 DATA 00,00,00,00,00,00,00,00,0  
3410 DATA 00,00,00,00,00,00,00,00,0  
3420 DATA 00,00,00,00,00,00,00,00,0  
3430 DATA 00,00,00,00,00,00,00,00,0  
3440 DATA 00,00,00,00,00,00,00,00,0  
3450 DATA 00,00,00,00,00,00,00,00,0  
3460 DATA 00,00,00,00,00,00,00,00,0  
3470 DATA 00,00,00,00,00,00,00,00,0  
3480 DATA 00,00,00,00,00,00,00,00,0  
3490 DATA 00,00,00,00,00,00,00,00,0  
3500 DATA 00,00,00,00,00,00,00,00,0  
3510 DATA 00,00,00,00,00,00,00,00,0  
3520 DATA 00,00,00,00,00,00,00,00,0  
3530 DATA 00,00,00,00,00,00,00,00,0  
3540 DATA 00,00,00,00,00,00,00,00,0  
3550 DATA 00,00,00,00,00,00,00,00,0  
3560 DATA 00,00,00,00,00,00,00,00,0  
3570 DATA 00,00,00,00,00,00,00,00,0  
3580 DATA 00,00,00,00,00,00,00,00,0  
3590 DATA 00,00,00,00,00,00,00,00,0  
3600 DATA 00,00,00,00,00,00,00,00,0  
3610 DATA 00,00,00,00,00,00,00,00,0  
3620 DATA 00,00,00,00,00,00,00,00,0  
3630 DATA 00,00,00,00,00,00,00,00,0  
3640 DATA 00,00,00,00,00,00,00,00,0  
3650 DATA 00,00,00,00,00,00,00,00,0  
3660 DATA 00,00,00,00,00,00,00,00,0

3670 DATA 00,00,00,00,00,00,00,00,0  
3680 DATA 00,00,00,00,00,00,00,00,0  
3690 DATA 00,00,00,00,00,00,00,00,0  
3700 DATA 00,00,00,00,00,00,00,00,0  
3710 DATA 00,00,00,00,00,00,00,00,0  
3720 DATA 00,00,00,00,00,00,00,00,0  
3730 DATA 00,00,00,00,00,00,00,00,0  
3740 DATA 00,00,00,00,00,00,00,00,0  
3750 DATA 00,00,00,00,00,00,00,00,0  
3760 DATA 00,00,00,00,00,00,00,00,0  
3770 DATA 00,00,00,00,00,00,00,00,0  
3780 DATA 00,00,00,00,00,00,00,00,0  
3790 DATA 00,00,00,00,00,00,00,00,0  
3800 DATA 00,00,00,00,00,00,00,00,0  
3810 DATA 00,00,00,00,00,00,00,00,0  
3820 DATA 00,00,00,00,00,00,00,00,0  
3830 DATA 00,00,00,00,00,00,00,00,0  
3840 DATA 00,00,00,00,00,00,00,00,0  
3850 DATA 00,00,00,00,00,00,00,00,0  
3860 DATA 00,00,00,00,00,00,00,00,0  
3870 DATA 00,00,00,00,00,00,00,00,0  
3880 DATA 00,00,00,00,00,00,00,00,0  
3890 DATA 00,00,00,00,00,00,00,00,0  
3900 DATA 00,00,00,00,00,00,00,00,0  
3910 DATA 00,00,00,00,00,00,00,00,0  
3920 DATA 00,00,00,00,00,00,00,00,0  
3930 DATA 00,00,00,00,00,00,00,00,0  
3940 DATA 00,00,00,00,00,00,00,00,0  
3950 DATA 00,00,00,00,00,00,00,00,0  
3960 DATA 00,00,00,00,00,00,00,00,0  
3970 DATA 00,00,00,00,00,00,00,00,0  
3980 DATA 00,00,00,00,00,00,00,00,0  
3990 DATA 00,00,00,00,00,00,00,00,0  
4000 DATA 00,00,00,00,00,00,00,00,0  
4010 DATA 00,00,00,00,00,00,00,00,0  
4020 DATA 00,00,00,00,30,30,30,30,195  
4030 DATA 50,00,00,00,00,00,00,00,0  
4040 DATA 55,53,45,20,53,50,41,43,504  
4050 DATA 45,20,54,47,20,53,45,41,524  
4060 DATA 45,43,54,20,53,54,41,52,560  
4070 DATA 54,20,53,43,52,45,45,41,564  
4080 DATA 20,54,48,45,41,20,20,20,453  
4090 DATA 50,52,45,53,53,20,27,45,537  
4100 DATA 41,54,45,52,27,20,54,41,547  
4110 DATA 20,43,41,41,54,49,46,45,576  
4120 DATA 45,21,20,20,20,20,20,20,387  
4130 DATA 20,20,20,20,20,20,20,20,256  
4140 DATA 53,54,41,52,54,20,53,43,500  
4150 DATA 52,45,45,41,30,20,20,20,485  
4160 DATA 20,20,20,20,20,20,20,20,256  
4170 DATA 20,20,20,20,20,20,20,44,292  
4180 DATA 20,45,20,40,20,20,20,20,385  
4190 DATA 20,20,20,20,20,20,20,20,256  
4200 DATA 20,20,20,20,20,20,20,20,256  
4210 DATA 20,20,20,20,20,20,20,20,256  
4220 DATA 20,20,20,20,20,20,20,20,381  
4230 DATA 20,41,20,44,20,45,20,20,376  
4240 DATA 20,20,20,20,20,20,20,20,256  
4250 DATA 20,20,20,20,20,20,20,21,257  
4260 DATA 13,25,20,16,16,20,20,20,236  
4270 DATA 14,20,10,00,17,03,00,18,112  
4280 DATA 00,00,10,25,13,35,10,10,177  
4290 DATA 00,00,00,00,00,00,00,31,60  
4300 DATA 00,00,50,00,01,00,50,00,844  
4310 DATA 00,00,17,50,21,00,50,11,962  
4320 DATA 00,50,01,00,00,36,00,00,027  
4330 DATA 00,00,02,70,00,00,70,00,1365

4340 DATA 00,50,00,00,77,21,00,50,861  
4350 DATA 11,00,50,01,00,00,30,00,307  
4360 DATA 00,00,00,00,70,00,00,00,1313  
4370 DATA 00,07,50,00,9F,60,FB,76,1279  
4380 DATA 70,3F,C3,74,50,FB,00,00,1215  
4390 DATA 00,30,00,00,0E,00,21,02,693  
4400 DATA 10,00,3F,00,3E,01,00,90,003  
4410 DATA 00,30,00,00,96,00,09,3E,1054  
4420 DATA 00,00,50,00,AF,32,01,50,907  
4430 DATA 32,02,50,32,FB,50,21,00,799  
4440 DATA 50,11,00,50,01,00,00,36,397  
4450 DATA 30,00,20,11,99,50,11,FA,1000  
4460 DATA 50,50,00,01,20,01,00,00,605  
4470 DATA 3E,03,32,00,50,AF,32,00,707  
4480 DATA 50,50,00,3E,01,21,43,026  
4490 DATA 50,00,00,00,21,01,10,00,922  
5000 DATA \*\*\*

## Program 2

```
5 REM program 2
6 PRINT "program 2 is running":PRINT Work
  ing on line"
10 valid$="0123456789ABCDEF":len=4500
20 x=23500
30 FOR y=0 TO 7
40 READ num TO f: IF num$="" THEN 110
50 IF INSTR(valid$,LEFT$(num$,1)) OR IN$
  TR (valid$,RIGHT$(num$,1)) THEN num$
  AL("R":num$)=POKE x,y,num ELSE 120
60 chk=chk+num
70 NEXT:lin=lin+0
80 READ chk:IF chk<check THEN 130
90 chk=0
95 PRINT lnj:CHR$(11)
100 x=x+6:GOTO 30
110 PRINT "bytes"=xxy
115 RUN:program3
120 PRINT "invalid character in line "':ln
  :END
130 PRINT "Checksum error in line "':ln:EN
  D
4500 DATA 3F,00,3E,03,00,90,00,3E,913
4510 DATA 00,00,96,00,09,7E,00,50,1164
4520 DATA 00,23,10,9F,09,7E,FF,FF,1323
4530 DATA C0,23,C0,5A,00,C0,10,3C,1003
4540 DATA 0E,0A,21,FA,00,00,12,1A,543
4550 DATA C0,5E,0F,FE,09,00,9F,04,1256
4560 DATA FE,0C,AE,04,FE,00,02,1255
4570 DATA 54,5C,4F,3A,09,5A,07,CA,090
4580 DATA 4F,5C,3E,0C,C3,5A,5C,41,681
4590 DATA 3A,00,5A,00,05,00,53,61,1013
4600 DATA 01,13,C1,10,02,05,11,58,965
4610 DATA 00,19,01,13,13,00,C2,20,524
4620 DATA 5C,09,3E,01,00,96,00,3E,900
4630 DATA 1A,00,00,3E,0A,00,3A,00,875
4640 DATA 00,3E,1E,C0,5A,00,3E,0A,853
4650 DATA C0,5A,00,3E,0F,C0,5A,00,1041
4660 DATA 3E,0C,00,50,00,00,04,21,693
4670 DATA 05,57,C0,15,3C,3E,1A,C0,705
4680 DATA 5A,00,3E,00,C0,5A,00,3E,883
4690 DATA 50,C0,5A,00,3E,00,C0,5A,919
4700 DATA 00,3E,19,C0,5A,00,3E,00,818
4710 DATA C0,96,00,C9,3E,0C,C0,5A,1112
4720 DATA 00,00,62,21,46,07,00,00,916
4730 DATA 00,C0,15,5C,21,05,57,C0,936
4740 DATA 10,9C,C0,AE,62,11,00,00,615
4750 DATA E0,53,0A,55,C0,09,00,FE,1070
4760 DATA 31,CA,30,50,FE,32,CA,12,922
4770 DATA 00,FE,33,CA,FE,5C,0D,50,1209
4780 DATA 0A,55,10,00,00,00,55,74,659
4790 DATA 07,C0,30,5C,C9,C0,00,00,1486
4800 DATA 62,3E,0C,C0,5A,00,21,00,699
4810 DATA 01,C0,75,00,21,97,5A,00,790
4820 DATA 5F,C0,15,5C,C0,AE,62,3A,908
4830 DATA 05,58,C0,41,C0,5A,00,3E,1028
4840 DATA 00,C0,5A,00,C0,09,00,FE,1145
```

4850 DATA 80,CA,84,5C,FE,20,C2,8F,902  
4860 DATA 59,3A,85,5B,C6,84,E6,8F,819  
4870 DATA 32,85,58,C3,8F,59,CD,87,946  
4880 DATA BC,CD,C7,50,3E,83,32,8A,936  
4890 DATA 5A,3A,85,58,32,84,50,844  
4900 DATA CC,63,CD,8E,A2,61,19,58,1150  
4910 DATA 11,FA,58,81,8F,81,36,84,558  
4920 DATA ED,80,21,10,81,11,19,58,945  
4930 DATA 81,DC,80,ED,80,8E,89,48,721  
4940 DATA CD,3E,8C,AF,32,FB,56,21,1044  
4950 DATA F9,56,3E,86,81,FF,80,ED,898  
4960 DATA B1,11,19,58,87,ED,52,70,1142  
4970 DATA 39,32,87,5E,8C,8C,CD,5A,703  
4980 DATA 8B,5A,84,5E,5F,16,80,21,615  
4990 DATA 47,5B,19,7E,27,32,62,50,591  
5000 DATA AF,32,61,50,3E,80,CD,8E,694  
5010 DATA BC,21,8C,80,CD,75,80,21,781  
5020 DATA 5E,56,8E,89,CD,15,5C,21,546  
5030 DATA 8E,81,CD,75,80,21,67,56,746  
5040 DATA 8E,23,CD,15,5C,5A,84,58,657  
5050 DATA C6,61,CD,5A,80,8C,80,1146  
5060 DATA FE,20,CA,EA,5A,8A,85,58,1086  
5070 DATA 3C,32,83,58,47,48,3E,81,537  
5080 DATA CD,32,CD,8C,19,80,CD,19,1892  
5090 DATA 8D,C3,CD,50,3E,81,CD,8E,956  
5100 DATA BC,CD,36,62,CD,87,81,CD,1347  
5110 DATA EF,62,AF,32,89,5A,11,80,819  
5120 DATA 59,CD,28,5C,8C,AE,62,FB,1154  
5130 DATA CD,7C,5F,CD,5E,3A,9E,1076  
5140 DATA 5A,EE,81,32,96,5A,11,80,649  
5150 DATA 59,CD,28,5C,8E,87,CD,85,879  
5160 DATA BC,CD,80,89,32,83,5E,FE,1112  
5170 DATA FC,CA,31,5E,CD,85,80,CD,1197  
5180 DATA 85,63,3A,89,5A,8C,CD,80,886  
5190 DATA 5E,86,53,3E,8A,CD,5A,80,785  
5200 DATA 76,76,76,76,45,11,10,13,1185  
5210 DATA 3E,81,CD,8E,8C,AF,32,89,832  
5220 DATA 5A,3A,84,5A,50,FE,FF,CD,1146  
5230 DATA 32,8A,5C,3A,5D,50,16,80,689  
5240 DATA 1E,14,21,05,59,ED,05,78,938  
5250 DATA 7E,1E,82,CD,60,5E,36,42,1073  
5260 DATA C3,46,5E,FE,A2,CD,75,5E,1276  
5270 DATA 3A,30,42,C3,46,5E,60,CD,1063  
5280 DATA C7,5E,7E,FE,22,CA,97,65,1161  
5290 DATA FE,12,CA,45,65,FE,82,CA,1328  
5300 DATA B3,65,FE,32,CA,65,FE,7E,1216  
5310 DATA FE,82,CA,84,5E,FE,83,CA,1191  
5320 DATA B4,5E,8A,8F,5E,8C,2C,1082  
5330 DATA 6A,1E,80,CA,0D,65,11,51,1331  
5340 DATA 28,10,42,5B,5E,1E,14,15,224  
5350 DATA C2,50,5E,C9,81,74,80,89,612  
5360 DATA FE,6E,7F,CD,36,5F,CD,FE,1283  
5370 DATA ED,42,CD,8C,FB,63,5E,8C,1418  
5380 DATA 80,7E,5F,56,80,81,14,80,478  
5390 DATA 89,7E,6E,8E,FE,80,CA,14,863  
5400 DATA 65,FE,8A,8A,8E,6E,FE,8C,1277  
5410 DATA CA,8E,6E,FE,80,CA,07,61,1080  
5420 DATA 7E,6E,7F,CA,74,5E,ED,42,1326  
5430 DATA 75,CD,46,5E,70,7F,7E,947  
5440 DATA FE,80,CA,15,5F,ED,8E,FE,1076  
5450 DATA 80,CA,15,5F,FE,8A,CA,15,813  
5460 DATA 5F,FE,8C,CA,15,5F,7E,87,972  
5470 DATA C2,1C,5F,CD,FE,ED,42,3E,1284  
5480 DATA C6,3E,46,5E,81,05,85,3E,1400  
5490 DATA 81,32,8C,55,ED,5F,ED,87,845  
5500 DATA C0,84,32,11,55,21,8C,55,484  
5510 DATA CD,8A,8C,CD,47,62,40,4A,1072  
5520 DATA 7E,FE,01,CA,46,5E,FE,86,1183  
5530 DATA CA,46,5E,23,7E,47,CD,61,1081

5540 DATA 5F,11,14,80,ED,52,7E,87,744  
5550 DATA C2,61,5F,2B,7E,36,80,CD,812  
5560 DATA 17,25,77,19,CD,FF,C3,86,1245  
5570 DATA 5E,11,14,80,80,69,2B,7E,581  
5580 DATA A7,C2,46,5E,ED,52,7E,47,1233  
5590 DATA C2,46,5E,25,7E,36,80,2B,712  
5600 DATA 77,C3,46,5E,21,19,58,3A,1082  
5610 DATA 87,58,5F,16,80,19,3A,65,524  
5620 DATA 58,87,CA,AC,5F,5E,CD,24,1197  
5630 DATA 80,87,32,66,50,8E,8F,FE,1154  
5640 DATA 81,CA,CD,5F,FE,82,CA,60,1158  
5650 DATA 5F,FE,8A,CA,50,5F,FE,80,1133  
5660 DATA CA,62,5F,C9,3A,87,5E,16,1215  
5670 DATA OF,81,CA,16,5F,50,80,1371  
5680 DATA CA,22,5F,FE,4F,CA,0D,5F,1338  
5690 DATA FE,51,CA,CD,5F,C9,11,14,1074  
5700 DATA 80,C5,64,5F,11,EC,FF,C3,1221  
5710 DATA 4A,5F,11,81,80,3E,FF,32,708  
5720 DATA 8A,5A,CD,5A,5F,11,FF,FF,1274  
5730 DATA AF,52,80,5A,19,3A,65,58,729  
5740 DATA A7,CA,7F,5F,5A,46,58,6E,1192  
5750 DATA 10,CD,C2,61,C3,FF,5F,3A,954  
5760 DATA 83,58,6E,20,CA,2C,61,7E,950  
5770 DATA A7,CA,1A,61,FE,81,CA,10,965  
5780 DATA 61,FE,8C,8A,84,63,C3,30,913  
5790 DATA 61,C9,AF,32,63,5B,CD,86,1134  
5800 DATA 62,3E,8C,CD,5A,80,21,8C,699  
5810 DATA 8C,CD,75,80,21,15,55,86,659  
5820 DATA 28,CD,15,5C,3A,AE,62,CD,1040  
5830 DATA 8E,80,FE,FE,EA,CA,8A,1058  
5840 DATA 61,1E,48,CD,2F,80,CD,60,1182  
5850 DATA 62,CD,85,80,3E,8C,CD,5A,862  
5860 DATA 80,21,80,88,CD,75,80,21,778  
5870 DATA 64,55,8E,84,CD,15,5C,CD,894  
5880 DATA AE,62,21,89,8F,CD,75,80,838  
5890 DATA 21,CD,5F,CD,69,48,8A,926  
5900 DATA C0,5A,80,21,81,5F,CD,19,1225  
5910 DATA 60,3E,8A,CD,5A,80,21,80,870  
5920 DATA 5F,CD,89,60,3E,8A,CA,5A,996  
5930 DATA 80,21,86,5F,CD,89,60,3E,1093  
5940 DATA 8A,CD,5A,80,3A,C1,5F,47,989  
5950 DATA 3A,8C,5F,80,CA,49,6A,3A,954  
5960 DATA 82,5F,80,CA,49,6A,3A,87,1069  
5970 DATA 5E,8A,CA,49,6A,3A,C5,5F,991  
5980 DATA 47,8A,82,5F,80,CA,49,60,957  
5990 DATA 3A,87,5F,80,CA,49,6A,3A,949  
6000 DATA 82,5F,47,3A,8E,5F,80,CA,1065  
6010 DATA 49,60,3E,80,CD,5A,80,3E,788  
6020 DATA 80,CD,5A,80,CD,5A,80,21,1007  
6030 DATA 2C,56,80,28,CD,15,5C,CD,699  
6040 DATA 80,80,ED,5F,FE,84,CA,49,1125  
6050 DATA 80,FE,59,CA,8E,5C,C3,37,1323  
6060 DATA 60,3E,3F,CD,5A,80,3E,80,773  
6070 DATA C9,5A,80,CD,89,25,66,1145  
6080 DATA 5F,47,6E,8E,CA,69,60,78,1271  
6090 DATA 77,CD,5A,80,3E,80,CA,5A,966  
6100 DATA 80,80,3E,81,32,65,5B,89,804  
6110 DATA 05,25,21,88,5E,80,CA,8C,1268  
6120 DATA 81,81,78,47,CD,3A,87,58,1205  
6130 DATA 83,32,87,58,30,86,AF,ED,876  
6140 DATA 52,36,80,C9,7E,47,CA,50,912  
6150 DATA 61,FE,81,CA,50,61,FE,83,988  
6160 DATA CA,82,65,FE,82,CD,7E,FE,1128  
6170 DATA EC,8C,FE,1A,CD,80,78,47,1228  
6180 DATA 3A,80,ED,ED,52,36,80,C9,998  
6190 DATA 30,80,C9,ED,65,26,80,29,674  
6200 DATA 29,29,29,29,29,81,18,31,311  
6210 DATA 89,ED,81,ED,80,10,C5,65,1148  
6220 DATA 80,8A,1A,77,15,25,10,7A,475  
6230 DATA E1,81,80,80,89,ED,7E,61,676  
6240 DATA 81,80,3F,87,ED,42,C1,10,919  
6250 DATA 5E,81,81,8A,80,89,C9,789  
6260 DATA 58,CD,80,14,3E,07,CD,50,762  
6270 DATA 53,61,C1,10,77,21,30,C7,916  
6280 DATA 06,14,3E,87,C3,CD,53,61,677  
6290 DATA C1,10,77,21,70,CD,80,8A,937  
6300 DATA 3E,87,C3,CD,53,61,3E,87,728  
6310 DATA 11,48,80,19,10,CD,55,61,1,692

6320 DATA 11,50,80,19,10,EA,3E,81,435  
6330 DATA CD,6F,80,3E,81,CD,72,80,1072  
6340 DATA 21,40,5E,8E,50,15,5C,6A,1864  
6350 DATA CD,8A,62,CD,81,61,C9,3E,1231  
6360 DATA 81,56,80,52,89,5A,CD,46,786  
6370 DATA 5E,21,44,CD,3E,83,CD,53,740  
6380 DATA 81,3E,26,CD,4F,80,3E,81,763  
6390 DATA CD,72,80,3A,62,58,CD,3F,1019  
6400 DATA CD,3F,CD,3F,CD,3F,6E,38,1044  
6410 DATA CD,5A,80,3A,62,58,6E,8F,973  
6420 DATA C6,50,CD,5A,80,C9,3E,20,1023  
6430 DATA CD,6F,80,3E,81,CD,72,80,1072  
6440 DATA 3A,61,50,CD,3F,CD,3F,CD,981  
6450 DATA 3F,CD,3F,CD,3F,CD,5A,80,1057  
6460 DATA 3A,61,50,16,8F,CD,30,CD,942  
6470 DATA 5A,80,C9,69,11,14,80,716  
6480 DATA A7,ED,52,7E,6E,80,CA,61,1269  
6490 DATA 5F,52,89,5A,CD,46,5E,81,1052  
6500 DATA 50,5A,81,EE,FF,25,7E,FE,1084  
6510 DATA 80,CD,60,62,89,7E,47,CD,908  
6520 DATA 61,62,28,56,22,C3,46,5E,985  
6530 DATA A7,62,60,60,7E,FE,86,CD,3781  
6540 DATA 76,62,7E,FE,47,CD,46,5E,972  
6550 DATA 25,36,12,C3,46,5E,3E,46,923  
6560 DATA 5E,CD,46,5E,89,7E,FE,86,943  
6570 DATA C2,46,5E,3C,32,89,5A,3,986  
6580 DATA A6,5E,21,20,CD,80,85,AF,786  
6590 DATA C5,CD,53,61,C1,10,78,3A,1097  
6600 DATA 8A,5A,47,47,C2,21,20,CD,923  
6610 DATA 3E,86,C3,CD,53,61,C1,70,968  
6620 DATA CD,8A,6F,10,73,C9,8E,89,788  
6630 DATA 48,CD,58,8C,3E,80,8E,89,598  
6640 DATA 8E,89,CD,32,8C,80,1A,4E,570  
6650 DATA 3E,81,CD,32,8C,3E,8E,86,576  
6660 DATA 81,48,CD,32,8C,3E,8E,86,681  
6670 DATA 80,48,CD,32,8C,3E,8E,81,779  
6680 DATA 80,89,48,CD,32,8C,3E,8E,594  
6690 DATA 80,89,48,CD,32,8C,3E,8E,595  
6700 DATA 80,89,48,CD,32,8C,3E,8E,593  
6710 DATA 81,CD,72,80,3E,80,CD,6F,835  
6720 DATA 80,21,CD,3A,80,85,CD,15,687  
6730 DATA 5C,89,1E,80,ED,83,21,65,81,803  
6740 DATA 80,11,80,80,CD,31,63,01,579  
6750 DATA E1,56,80,3A,61,58,32,27,624  
6760 DATA 32,61,58,47,3A,62,58,80,740  
6770 DATA CA,28,65,85,95,C9,8E,62,1105  
6780 DATA 81,EE,C3,1A,61,F1,C3,ED,1414  
6790 DATA 63,3A,90,5A,85,32,90,5A,808  
6800 DATA FE,3A,9A,43,6A,8A,8A,82,870  
6810 DATA 90,5A,24,47,3A,8F,5A,8A,808  
6820 DATA 32,8F,5A,FE,3A,8A,56,65,998  
6830 DATA 8E,8A,32,8F,5A,1C,47,3A,760  
6840 DATA 8E,5A,83,32,8E,5A,3A,957  
6850 DATA 8A,69,65,8A,8A,8E,8E,5A,928  
6860 DATA 1A,47,8A,5A,82,32,90,80,797  
6870 DATA 3A,FE,3A,8A,8F,62,06,8A,1181  
6880 DATA 32,80,5A,3A,8C,5A,3C,32,679  
6890 DATA 8C,5A,C3,8F,62,3A,C1,5E,1158  
6900 DATA 30,66,83,32,FC,5E,8C,5A,932  
6910 DATA FB,56,50,27,32,FB,5E,CD,1018  
6920 DATA 9F,65,3E,81,32,89,5A,21,631  
6930 DATA 82,8A,CD,75,80,3A,FB,56,916  
6940 DATA FE,10,CD,85,65,15,81,80,998  
6950 DATA 80,CD,38,8C,F1,47,CD,3F,1027  
6960 DATA CD,3F,CD,3F,CD,3F,CD,30,1044  
6970 DATA CD,5A,80,78,6E,8F,CD,30,1093  
6980 DATA C5,80,CD,3A,8A,58,21,5A,994  
6990 DATA 10,81,22,58,5E,47,CD,47,801  
7000 DATA 11,CD,80,19,10,ED,22,58,656

7010 DATA 50,C9,AF,C9,BE,BC,21,0C,921  
7020 DATA 05,CD,75,00,21,54,56,06,723  
7030 DATA 0A,CD,15,5C,06,5A,CD,19,654  
7040 DATA 0D,10,FB,3E,00,CD,90,00,1054  
7050 DATA 21,00,05,11,00,00,CD,31,509  
7060 DATA 63,3E,03,CD,90,00,3A,84,890  
7070 DATA 50,3C,FE,1A,CA,20,67,32,815  
7080 DATA 84,50,CB,09,0D,CD,09,0B,1022  
7090 DATA CD,09,00,CD,09,0B,CD,CC,1211  
7100 DATA 63,C3,5A,50,22,92,5A,CD,952  
7110 DATA 50,65,3E,00,32,95,5A,2A,585  
7120 DATA 92,5A,7E,CB,3F,CB,3F,CB,1097  
7130 DATA 3F,CB,3F,E6,0F,32,91,5A,859  
7140 DATA A7,CA,50,64,FE,01,CA,70,1129  
7150 DATA 64,FE,03,CA,85,64,FE,02,1048  
7160 DATA CA,9A,64,3E,00,32,94,5A,806  
7170 DATA 2A,92,5A,11,FF,FF,19,7E,956  
7180 DATA E6,7F,C2,70,64,CD,0E,64,1258  
7190 DATA 3E,01,52,94,5A,2A,92,5A,629  
7200 DATA 11,14,00,19,7E,E6,7F,C2,739  
7210 DATA 85,64,CD,0E,64,3E,03,32,843  
7220 DATA 94,5A,2A,92,5A,11,01,00,534  
7230 DATA 19,7E,E6,7F,C2,9A,64,CD,1161  
7240 DATA 0E,64,3E,02,32,94,5A,2A,684  
7250 DATA 92,5A,11,EC,FF,19,7E,E6,1125  
7260 DATA 7F,C2,AF,64,CD,0E,64,3A,1149  
7270 DATA 95,5A,FE,02,CA,A6,5E,3C,1017  
7280 DATA 32,95,5A,C3,50,64,3A,95,882  
7290 DATA 5A,FE,02,CA,02,64,AF,3A,1091  
7300 DATA 94,5A,47,3A,91,5A,80,FE,984  
7310 DATA 03,C8,3A,94,5A,CD,27,CB,944  
7320 DATA 27,CB,27,CB,27,F6,09,77,897  
7330 DATA 2A,92,5A,56,00,E1,C3,A6,918  
7340 DATA 5E,1A,E6,FB,F6,00,12,E6,1095  
7350 DATA 0F,3A,96,5A,C6,0A,C3,54,800  
7360 DATA 5C,1A,E6,FB,F6,00,12,E6,1090

7370 DATA FB,CB,3F,CB,3F,CB,3F,CB,1241  
7380 DATA 3F,ES,21,57,65,85,4F,7E,883  
7390 DATA E1,C3,54,5C,ES,ES,05,21,1300  
7400 DATA 91,56,CB,AA,0C,21,00,01,820  
7410 DATA 11,00,00,CD,51,63,01,E1,804  
7420 DATA 00,E1,00,06,01,03,00,36,1000  
7430 DATA FF,03,00,56,00,03,00,36,811  
7440 DATA EC,03,00,36,ED,03,00,36,1029  
7450 DATA EB,03,7A,FE,0A,02,A6,5E,1094  
7460 DATA 00,56,15,03,00,36,14,03,595  
7470 DATA 00,56,15,03,C3,A6,5E,00,762  
7480 DATA 00,09,09,2A,92,5A,7E,3C,490  
7490 DATA 4F,23,7E,FE,06,CA,88,65,939  
7500 DATA 20,20,7E,FE,06,CA,88,65,911  
7510 DATA 2A,92,5A,11,14,00,19,7E,466  
7520 DATA FE,06,CA,88,65,2A,92,5A,977  
7530 DATA 11,EC,FF,19,7E,FE,06,CD,1111  
7540 DATA 71,3E,01,32,89,5A,2A,92,641  
7550 DATA 5A,36,00,E1,C3,A6,5E,23,859  
7560 DATA 7E,A7,C2,65,C3,87,61,73,1122  
7570 DATA 36,00,C3,A6,5E,20,7E,A7,845  
7580 DATA C2,A6,5E,36,32,23,36,00,647  
7590 DATA C3,A6,5E,36,02,C3,C7,5E,999  
7600 DATA E6,0F,5F,36,00,09,7E,FE,785  
7610 DATA 06,C2,C7,65,C3,07,61,73,1122  
7620 DATA C3,A6,5E,36,02,C3,A6,5E,1094  
7630 DATA 22,92,5A,CD,50,65,3E,00,729  
7640 DATA 32,95,5A,2A,92,5A,7E,CB,896

7650 DATA 3F,CB,3F,CB,3F,CB,3F,E6,1091  
7660 DATA 0F,32,91,5A,CA,01,66,FE,859  
7670 DATA 01,CA,16,66,FE,03,CA,2B,829  
7680 DATA 66,FE,02,CA,40,66,C3,A6,1087  
7690 DATA 5E,5E,00,32,94,5A,2A,92,632  
7700 DATA 5A,11,EC,FF,19,7E,E6,7F,1106  
7710 DATA C2,16,66,CB,66,66,3E,01,788  
7720 DATA 32,94,5A,2A,92,5A,11,01,584  
7730 DATA 00,19,7E,E6,7F,C2,20,66,847  
7740 DATA CB,64,66,3E,03,32,94,5A,760  
7750 DATA 2A,92,5A,11,14,00,19,7E,466  
7760 DATA E6,7F,C2,40,66,CB,64,66,1124  
7770 DATA 3E,02,32,94,5A,2A,92,5A,630  
7780 DATA 11,FF,FF,19,7E,E6,7F,C2,1229  
7790 DATA 55,66,CD,64,66,3A,95,5A,891  
7800 DATA FE,02,CA,A6,5E,3C,32,95,977  
7810 DATA 5A,C3,01,66,3A,95,5A,FE,939  
7820 DATA 02,CA,77,66,3A,94,5A,47,792  
7830 DATA 3A,91,5A,80,FE,03,CB,3A,936  
7840 DATA 94,5A,CB,27,CB,27,CB,27,964  
7850 DATA CB,27,F6,0C,77,2A,92,5A,897  
7860 DATA 36,00,E1,C3,A6,5E,E5,05,1176  
7870 DATA 21,9A,56,CB,AA,0C,01,E1,1270  
7880 DATA 01,14,00,C3,F4,5E,C9,3E,817  
7890 DATA 00,32,84,50,CD,34,67,06,636  
7900 DATA 00,C5,CB,56,5E,CB,7C,5F,1006  
7910 DATA CD,09,00,C1,0A,09,66,10,1115  
7920 DATA FB,CD,06,62,CD,C7,50,3E,1314  
7930 DATA 01,CD,0E,0C,CD,06,62,CD,1130  
7940 DATA 87,61,21,01,01,CB,75,00,776  
7950 DATA 21,FF,5A,06,50,CB,15,5C,774  
7960 DATA 21,10,81,3A,84,58,A7,CA,825  
7970 DATA E9,66,47,11,0C,00,19,10,684  
7980 DATA FD,11,F9,50,01,0C,00,ED,1065  
7990 DATA 00,06,14,C3,CD,56,5E,11,801  
8000 DATA \*\*\*

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8330 DATA 20,20,20,20,20,20,20,20,256
8340 DATA 20,20,20,20,20,20,20,20,256
8350 DATA 20,20,20,20,20,20,20,20,256
8360 DATA 20,20,20,50,55,55,40,20,440
8370 DATA 41,40,50,20,40,45,50,20,520
8380 DATA 20,20,20,20,20,20,20,20,256
8390 DATA 20,20,20,20,20,20,21,21,250
8400 DATA 21,21,21,21,21,21,21,21,264
8410 DATA 21,43,4F,40,47,52,41,54,550
8420 DATA 55,4C,41,54,49,4F,4E,53,623
8430 DATA 21,21,21,21,21,21,21,21,264
8440 DATA 21,21,21,21,21,21,20,20,262
8450 DATA 20,20,20,20,20,20,20,20,256
8460 DATA 20,5F,5F,5F,5F,5F,5F,5F,697
8470 DATA 5F,5F,5F,5F,5F,5F,5F,5F,760
8480 DATA 20,20,20,20,20,20,20,20,256
8490 DATA 20,20,20,20,20,20,20,20,256
8500 DATA 20,20,20,20,20,20,20,20,256
8510 DATA 20,20,20,20,20,20,20,20,256
8520 DATA 20,20,20,20,20,20,20,20,256
8530 DATA 20,20,20,20,20,20,20,20,256
8540 DATA 20,20,20,20,20,20,20,20,256
8550 DATA 50,6F,75,20,60,61,76,65,760
8560 DATA 20,63,6F,60,70,6C,65,74,700
8570 DATA 65,64,20,33,30,4C,41,54,621
8580 DATA 43,40,21,2C,50,6F,75,20,565
8590 DATA 60,61,76,65,20,20,63,6F,694
8600 DATA 60,70,6C,65,74,65,64,20,770
8610 DATA 74,60,65,20,75,6C,74,60,700
8620 DATA 60,61,74,65,20,74,65,73,707
8630 DATA 74,20,6F,66,20,72,65,66,710
8640 DATA 6C,65,70,73,2C,20,63,6F,730
8650 DATA 6F,72,64,60,6E,61,74,60,850
8660 DATA 6F,6E,20,61,6E,64,20,42,650
8670 DATA 4C,41,40,20,42,4C,41,40,524
8680 DATA 20,42,4C,41,40,21,21,21,410
8690 DATA 21,21,21,21,21,21,20,20,262
8700 DATA 52,60,6C,67,20,30,34,32,502
8710 DATA 31,35,20,33,30,30,33,20,372
8720 DATA 61,60,64,20,61,73,60,20,690
8730 DATA 66,6F,72,20,52,4F,42,4F,665
8740 DATA 21,20,20,20,20,20,20,20,257
8750 DATA 4C,6F,6F,60,20,6F,75,74,701
8760 DATA 20,46,6F,72,20,52,6F,62,602
8770 DATA 6F,73,6F,66,74,20,60,65,700
8780 DATA 70,74,20,67,72,65,61,74,700
8790 DATA 20,67,61,60,65,2C,20,57,605
8800 DATA 60,6C,64,20,77,65,73,74,706
8810 DATA 20,65,4E,63,6F,75,6E,74,706
8820 DATA 65,72,20,60,6E,20,33,44,621
8830 DATA 2C,6E,6F,20,6C,65,73,73,736
8840 DATA 20,20,20,20,20,20,20,20,270
8850 DATA 20,20,20,20,20,20,20,20,256
8860 DATA 20,20,20,20,20,20,20,20,256
8870 DATA 20,20,20,20,20,20,20,20,256
8880 DATA 20,20,20,20,20,20,20,20,256
8890 DATA 20,20,20,20,20,20,20,20,256
8900 DATA 20,20,20,20,20,20,20,50,304
8910 DATA 55,53,40,20,45,4E,54,45,572
8920 DATA 52,20,54,40,20,43,4F,4E,535
8930 DATA 54,40,4E,55,45,20,20,20,405
8940 DATA 20,20,20,20,20,20,FF,FF,702
8950 DATA FF,20,20,20,20,20,20,20,470
8960 DATA 20,20,20,20,20,20,20,20,256
8970 DATA 20,43,52,45,44,40,54,53,550
8980 DATA 20,20,20,20,20,20,20,20,256
8990 DATA 20,20,20,20,20,20,20,20,256
9000 DATA 20,20,20,20,20,20,20,20,256
9010 DATA 20,20,20,20,20,20,20,20,256
9020 DATA 20,5F,5F,5F,5F,5F,5F,5F,697
9030 DATA 20,20,20,20,20,20,20,20,256
9040 DATA 20,20,20,20,20,20,20,20,256
9050 DATA 20,20,50,52,40,47,52,41,523
9060 DATA 45,20,43,4F,44,45,20,41,400
9070 DATA 4E,44,20,44,45,53,40,47,542
9080 DATA 4E,3A,20,52,4F,42,4F,20,506
9090 DATA 20,20,20,20,20,20,20,20,256

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## Program 3

```

5 REM Listing3
6 PRINT"Program 3 is running":PRINT"Work
ing on line"
10 valid$="0123456789ABCDEF":ln=0000
20 x=26360
30 FOR y=0 TO 7
40 READ num$:IF num$="***" THEN 110
50 IF INSTR(valid$,LEFT$(num$,1)) OR INS
TR (valid$,RIGHT$(num$,1)) THEN num=Y
AL$(num$)=POKE x+y,num ELSE 120
60 chk=chk+num
70 NEXT:ln=ln+10
80 READ check:IF chk>check THEN 130
90 chk=0
95 PRINT ln:CHR$(11)
100 x=x+8:GOTO 30
110 PRINT"bytes=";x+y
115 RUN"program4
120 PRINT"Invalid character in line ";ln
:END
130 PRINT"Checksum error in line ";ln:EN
D
0000 DATA 00,50,00,20,5C,00,AE,62,916
0010 DATA 3A,96,5A,EE,01,32,96,5A,827
0020 DATA AF,32,09,5A,C0,00,00,C1,1044
0030 DATA 00,10,00,3A,04,50,3C,FE,1040
0040 DATA 1A,C0,32,04,50,C3,00,66,970
0050 DATA 3E,01,C0,0E,0C,21,36,60,661
0060 DATA C0,10,3C,C0,00,00,FE,00,991
0070 DATA C0,C3,20,67,3E,01,C0,0E,823
0080 DATA 0C,C0,06,62,21,F1,60,C0,1200
0090 DATA 10,5C,C0,AE,62,C0,20,20,863
0100 DATA 20,20,20,20,20,20,20,20,256
0110 DATA 20,20,20,20,20,20,20,20,256
0120 DATA 20,20,20,20,20,20,20,20,256
0130 DATA 20,20,20,20,20,20,20,20,256
0140 DATA 20,20,20,20,20,20,20,20,256
0150 DATA 20,20,20,20,20,20,20,20,256
0160 DATA 20,20,20,20,20,20,53,50,355
0170 DATA 4C,41,54,43,40,21,20,20,461
0180 DATA 20,20,20,20,20,20,20,20,256
0190 DATA 20,20,20,20,20,20,20,20,256
0200 DATA 20,20,20,20,20,20,20,20,256
0210 DATA 20,20,20,20,20,20,5F,5F,302
0220 DATA 5F,5F,5F,5F,5F,5F,20,20,434
0230 DATA 20,20,20,20,20,20,20,20,256
0240 DATA 20,20,20,20,20,20,20,20,256
0250 DATA 20,20,20,20,20,20,20,20,256
0260 DATA 20,20,20,20,20,20,20,20,256
0270 DATA 20,20,20,20,20,20,20,20,256
0280 DATA 20,20,20,20,20,20,20,20,256
0290 DATA 20,20,20,20,20,20,20,20,256
0300 DATA 20,20,20,20,20,20,20,20,256
0310 DATA 20,20,20,20,20,20,20,20,256
0320 DATA 20,20,20,20,20,20,20,20,256

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9100 DATA 20,20,40,55,55,49,45,20,81  
9110 DATA 41,44,56,49,45,45,20,41,525  
9120 DATA 46,44,20,43,49,40,50,47,508  
9130 DATA 55,49,56,49,44,20,20,3A,508  
9140 DATA 20,42,44,57,52,41,4E,35,572  
9150 DATA 20,20,41,52,54,50,41,52,543  
9160 DATA 48,20,47,4E,20,50,41,50,521  
9170 DATA 45,52,20,3A,20,43,4C,41,481  
9180 DATA 59,44,45,4E,20,20,20,432  
9190 DATA 20,20,20,20,20,20,20,20,256  
9200 DATA 20,20,57,41,4C,4C,59,20,489  
9210 DATA 48,45,4C,50,46,55,4C,20,508  
9220 DATA 43,4F,40,40,45,4E,54,55,014  
9230 DATA 20,3A,20,47,41,56,49,4E,495  
9240 DATA 20,50,47,50,45,20,20,20,447  
9250 DATA 20,20,20,20,20,20,20,20,256  
9260 DATA 20,20,20,20,20,20,20,20,256  
9270 DATA 20,20,20,20,20,20,20,20,256  
9280 DATA 20,20,20,20,20,20,20,20,256  
9290 DATA 20,20,20,20,20,20,20,20,256  
9300 DATA 20,20,54,48,49,53,20,50,488  
9310 DATA 52,4F,47,52,61,40,20,49,561  
9320 DATA 53,20,42,52,4F,55,47,40,570  
9330 DATA 54,20,54,4F,20,59,4F,55,564  
9340 DATA 20,46,52,4F,40,20,20,20,436  
9350 DATA 20,52,4F,42,4F,53,4F,46,570  
9360 DATA 54,2E,57,52,49,54,54,5,089  
9370 DATA 4E,20,49,4E,20,41,20,53,473  
9380 DATA 45,43,52,45,54,20,4E,55,566  
9390 DATA 43,4C,45,41,52,20,20,20,455  
9400 DATA 20,42,55,4E,40,45,52,3C,531  
9410 DATA 53,4F,40,45,57,48,45,52,018  
9420 DATA 45,20,49,4E,20,52,4F,42,511  
9430 DATA 4F,27,53,20,42,43,44,52,518  
9440 DATA 4F,4F,40,2E,49,54,20,20,582  
9450 DATA 20,54,48,4F,55,53,41,4E,570  
9460 DATA 44,53,20,4F,46,20,41,50,589  
9470 DATA 50,4C,45,53,3C,53,41,52,582  
9480 DATA 4E,49,4E,45,53,20,41,46,556  
9490 DATA 44,20,42,4F,4F,5A,45,20,515  
9500 DATA 20,54,4F,20,50,45,52,46,520  
9510 DATA 45,43,54,2E,53,50,45,43,565  
9520 DATA 49,41,4C,20,54,48,41,4E,543  
9530 DATA 40,53,20,20,54,4F,20,50,549  
9540 DATA 54,45,20,54,40,45,20,20,478  
9550 DATA 20,50,52,4F,47,52,41,40,568  
9560 DATA 49,4E,47,20,50,49,44,47,546  
9570 DATA 45,4F,4E,2C,41,4E,44,20,513  
9580 DATA 4E,4F,20,54,40,41,4E,40,563  
9590 DATA 53,20,54,4F,20,40,55,40,546  
9600 DATA 20,44,41,44,21,21,21,21,379  
9610 DATA 2E,20,20,20,20,20,20,20,270  
9620 DATA 20,20,20,20,20,20,20,20,256  
9630 DATA 20,20,20,20,20,20,20,20,256  
9640 DATA 20,20,20,20,20,20,20,20,256  
9650 DATA 20,FF,FF,00,01,01,02,03,549  
9660 DATA 83,0A,0A,85,06,06,07,07,4E  
9670 DATA 06,09,0A,0A,0A,0B,0C,0C,81  
9680 DATA 00,0E,0F,0F,10,10,11,12,124  
9690 DATA 12,13,14,14,15,15,16,17,164  
9700 DATA 17,10,19,14,14,14,0E,0F,161  
9710 DATA 0F,10,10,11,12,12,13,14,159  
9720 DATA 14,14,01,00,3E,01,ED,529  
9730 DATA 79,0A,30,ED,79,01,12,12,511  
9740 DATA 01,00,00,3C,3B,0C,0C,93,002  
9750 DATA 00,5F,3C,99,0B,57,05,3E,1189  
9760 DATA 02,0C,96,0B,3E,0C,0A,91,913  
9770 DATA 00,11,07,0C,01,ED,03,1A,789  
9780 DATA 07,CA,CA,0C,FE,FF,CA,90,1545  
9790 DATA 6C,0C,0A,0B,13,0B,78,01,917  
9800 DATA C2,07,0C,01,7B,0C,90,0B,1385  
9810 DATA 7A,0C,96,0B,3E,01,21,23,795  
9820 DATA 0C,01,00,0C,0C,19,00,0C,921  
9830 DATA 19,0B,1E,01,ED,59,0A,ED,012  
9840 DATA 79,1E,0E,05,ED,59,5E,0A,586  
9850 DATA ED,59,32,2F,29,C2,49,1079  
9860 DATA 0C,09,13,1A,0C,90,0B,13,909  
9870 DATA 1A,0C,96,0B,03,9A,0C,00,1019  
9880 DATA 00,01,00,0A,20,20,20,20,150  
9890 DATA 20,20,20,20,20,20,20,20,256  
9900 DATA 0F,0F,07,20,20,20,20,20,772  
9910 DATA 06,0F,07,20,20,20,20,20,954  
9920 DATA 20,0F,20,20,20,20,20,20,367  
9930 DATA 20,20,20,20,20,20,20,20,256  
9940 DATA 20,20,20,20,20,20,20,20,256  
9950 DATA 0F,20,0F,20,0F,20,20,20,589  
9960 DATA 0F,20,0F,20,05,0F,0A,20,950  
9970 DATA 0F,0F,20,20,20,20,20,20,367  
9980 DATA 20,20,20,20,20,20,20,20,256  
9990 DATA 20,20,20,20,20,20,20,20,256  
10000 DATA 0F,0F,0A,20,0F,20,20,20,769  
10010 DATA 0F,0F,20,20,20,0F,20,20,700  
10020 DATA 0F,0F,20,20,20,20,20,20,256  
10030 DATA 20,20,20,20,20,20,20,20,256  
10040 DATA 20,20,20,20,20,20,20,20,256  
10050 DATA 0F,20,20,20,05,0F,0F,20,770  
10060 DATA 0F,20,0F,20,0F,20,20,589  
10070 DATA 20,CA,20,20,20,20,20,20,426  
10080 DATA 20,20,20,20,20,0A,0A,193  
10090 DATA 00,02,03,20,20,06,0F,458  
10100 DATA 07,0E,0F,07,07,20,20,955  
10110 DATA 20,20,06,0F,07,20,06,0F,1025  
10120 DATA 0F,0F,07,20,06,0F,07,20,1137  
10130 DATA 0F,20,0F,20,06,0F,07,954  
10140 DATA 20,20,20,20,20,0F,20,367  
10150 DATA 20,0F,0F,0F,20,0F,589  
10160 DATA 20,0F,0F,20,0F,20,20,478  
10170 DATA 0F,20,20,0F,20,20,478  
10180 DATA 0F,20,0F,20,0F,0F,81,011  
10190 DATA 20,20,20,20,20,0F,20,367  
10200 DATA 20,20,0F,20,0F,20,589  
10210 DATA 20,20,0F,20,0F,20,20,478  
10220 DATA 0F,20,20,0F,20,20,478  
10230 DATA 0F,20,0F,20,0F,0F,81,011  
10240 DATA 20,20,20,20,20,05,0F,548  
10250 DATA 07,20,0F,0F,0A,20,0F,952  
10260 DATA 20,0F,0F,0F,20,0F,589  
10270 DATA 0F,20,20,0F,0F,20,20,478  
10280 DATA 0F,0F,20,0F,0F,0F,922  
10290 DATA 20,20,20,20,20,20,20,256  
10300 DATA 0F,20,0F,20,20,0F,20,589  
10310 DATA 20,0F,20,0F,20,20,478  
10320 DATA 0F,20,20,0F,0F,20,20,478  
10330 DATA 0F,20,0F,20,05,0F,0A,950  
10340 DATA 20,20,20,20,20,20,20,256  
10350 DATA 0F,20,0F,20,20,0F,20,589  
10360 DATA 20,20,0F,20,0F,20,20,478  
10370 DATA 0F,20,20,0F,0F,20,20,478  
10380 DATA 0F,20,0F,20,20,20,478  
10390 DATA 0A,20,0F,20,20,05,0F,839  
10400 DATA 0F,0F,20,0F,20,20,589  
10410 DATA 0F,20,20,05,0F,0F,20,770  
10420 DATA 0F,20,0F,20,20,0F,20,589  
10430 DATA 20,20,0F,20,20,0F,20,589  
10440 DATA 20,20,20,0A,0A,02,01,122  
10450 DATA 0F,09,09,0F,09,09,09,72  
10460 DATA 0F,09,09,0F,09,20,20,141  
10470 DATA 20,20,20,20,20,20,20,256  
10480 DATA 20,20,20,0A,00,09,09,146  
10490 DATA 0F,09,09,0F,09,09,09,72  
10500 DATA 0F,09,09,2C,29,50,52,4F,398  
10510 DATA 42,4F,53,4F,46,5A,21,20,526  
10520 DATA 0C,0A,0F,09,09,09,09,72  
10530 DATA 0F,09,09,0F,09,09,09,20,95  
10540 DATA 20,20,20,20,20,20,20,256  
10550 DATA 20,20,20,20,0A,0A,0A,193  
10560 DATA 00,00,01,00,20,20,20,142  
10570 DATA 20,20,20,20,20,20,20,256  
10580 DATA 20,20,20,54,48,43,20,385  
10590 DATA 20,47,41,40,45,3A,20,436  
10600 DATA 20,20,20,20,20,20,20,256  
10610 DATA 20,20,20,20,20,4F,46,20,341  
10620 DATA 57,48,49,43,48,20,58,27,586  
10630 DATA 51,30,20,4F,57,4E,45,52,524  
10640 DATA 20,58,46,49,4E,40,41,581  
10650 DATA 20,43,4F,40,40,4F,44,4F,338  
10660 DATA 52,45,20,20,20,4C,4F,41,467  
10670 DATA 44,49,4E,20,20,53,43,52,554  
10680 DATA 45,45,4E,20,40,4F,52,45,575  
10690 DATA 20,53,54,49,40,55,4C,41,555  
10700 DATA 54,49,4E,47,20,41,4E,44,549  
10710 DATA 20,4F,46,20,20,57,48,49,477  
10720 DATA 43,48,20,54,48,45,20,47,499  
10730 DATA 52,45,41,54,20,50,4F,45,508  
10740 DATA 54,50,53,54,45,56,45,2E,553  
10750 DATA 42,20,50,57,49,54,48,20,466  
10760 DATA 41,4E,20,20,20,27,55,27,400  
10770 DATA 20,4E,41,54,20,27,50,48,496  
10780 DATA 27,29,53,41,49,44,20,433  
10790 DATA 27,55,54,45,45,52,20,58,555  
10800 DATA 49,46,46,45,4C,21,27,20,462  
10810 DATA 20,20,20,FF,20,20,20,479  
10820 DATA 20,20,0F,0F,0F,20,0F,811  
10830 DATA 0F,20,0F,20,20,0F,0F,700  
10840 DATA 0F,20,0F,0F,0F,20,0F,922  
10850 DATA 0F,20,0F,20,0F,20,0F,700  
10860 DATA 20,20,20,20,20,20,20,256  
10870 DATA 20,20,20,20,20,20,20,478  
10880 DATA 0F,20,0F,20,20,0F,20,589  
10890 DATA 0F,20,0F,20,20,0F,20,589  
10900 DATA 20,20,0F,20,0F,20,589  
10910 DATA 20,20,20,20,20,20,20,256  
10920 DATA 20,20,0F,0F,0F,20,0F,811  
10930 DATA 0F,20,20,20,20,0F,0F,700  
10940 DATA 0F,20,0F,20,0F,0F,0F,589  
10950 DATA 20,0F,0F,0F,20,0F,0F,700  
10960 DATA 20,20,20,20,20,20,20,256  
10970 DATA 20,20,20,20,0F,20,0F,478  
10980 DATA 20,0F,20,20,20,0F,20,478  
10990 DATA 0F,20,0F,20,0F,20,0F,589  
11000 DATA 20,0F,20,0F,20,20,20,478  
11010 DATA 20,20,0F,20,20,20,20,256  
11020 DATA 20,20,0F,20,0F,20,0F,700  
11030 DATA 20,20,0F,0F,0F,20,0F,700  
11040 DATA 0F,20,0F,0F,0F,0F,0F,700  
11050 DATA 0F,20,0F,0F,20,0F,0F,700  
11060 DATA 20,20,20,0A,20,20,20,234  
11070 DATA 20,20,20,20,20,20,20,256  
11080 DATA 20,20,48,49,47,40,20,53,467  
11090 DATA 43,4F,52,45,20,54,41,42,544  
11100 DATA 4C,45,20,20,20,20,20,20,337  
11110 DATA 20,20,20,20,20,20,20,256  
11120 DATA 20,20,20,20,20,20,20,256  
11130 DATA 20,20,5F,5F,5F,5F,5F,634  
11140 DATA 5F,5F,5F,5F,5F,5F,5F,768  
11150 DATA 5F,5F,20,20,20,20,20,20,382  
11160 DATA 20,20,20,20,20,20,54,46,348  
11170 DATA 42,4F,2C,44,20,52,4F,504  
11180 DATA 45,4F,2C,54,48,45,20,44,514  
11190 DATA 45,40,45,4E,54,45,44,20,546  
11200 DATA 44,57,41,52,46,20,52,49,559  
11210 DATA 43,48,41,52,44,20,54,48,542  
11220 DATA 42,40,44,45,50,50,52,45,549  
11230 DATA 53,53,45,44,20,4F,4E,45,561  
11240 DATA 2E,20,20,20,20,54,48,362  
11250 DATA 20,52,40,41,44,20,40,499  
11260 DATA 4F,47,20,53,54,49,40,55,595  
11270 DATA 4C,41,54,49,4E,40,20,55,562  
11280 DATA 41,48,52,41,20,20,44,41,501  
11290 DATA 56,45,20,50,4F,50,45,20,541  
11300 DATA 2E,2E,2E,2E,4E,45,44,4E,454  
11310 DATA 20,49,20,53,41,59,20,40,483  
11320 DATA 4F,52,40,20,3F,3F,44,55,547  
11330 DATA 53,54,49,4E,20,54,48,45,575  
11340 DATA 20,53,40,4F,4F,54,48,20,530  
11350 DATA 44,55,44,2C,08,45,20,571  
11360 DATA 74,60,69,6E,60,73,41,4E,000  
11370 DATA 41,59,44,45,4E,21,21,21,488  
11380 DATA 2C,20,47,4F,20,4F,4E,20,455  
11390 DATA 42,45,20,41,20,44,45,56,487  
11400 DATA 49,40,4E,20,20,20,41,4E,429  
11410 DATA 59,54,40,49,4E,47,20,49,572  
11420 DATA 51,20,41,20,53,48,49,52,520  
11430 DATA 54,20,54,48,41,54,20,40,530

11440 DATA 4F,56,45,55,20,49,41,523  
11450 DATA 4A,44,4F,4E,41,2E,2E,4E,49  
11460 DATA 2E,2E,2E,57,57,48,48,48,528  
11470 DATA 4B,48,48,55,55,55,55,55,641  
11480 DATA 55,55,55,21,21,21,00,00,554  
11490 DATA 00,00,00,00,00,00,00,0  
11500 DATA \*\*\*

11770 DATA 00,00,00,00,00,00,00,00,0  
11780 DATA 00,00,00,00,00,00,00,00,0  
11790 DATA 00,00,00,00,00,00,00,00,0  
11800 DATA 00,00,00,00,00,00,00,00,0  
11810 DATA 00,00,00,00,00,00,00,00,0  
11820 DATA 00,00,00,00,00,00,00,00,0  
11830 DATA 00,00,00,00,00,00,00,00,0  
11840 DATA 00,00,00,00,00,00,00,00,0  
11850 DATA 00,00,00,00,00,00,00,00,0  
11860 DATA 00,00,00,00,00,00,00,00,0  
11870 DATA 00,00,00,00,00,00,00,00,0  
11880 DATA 00,00,00,00,00,00,00,00,0  
11890 DATA 00,00,00,00,00,00,00,00,0  
11900 DATA 00,00,00,00,00,00,00,00,0  
11910 DATA 00,00,00,00,00,00,00,00,0  
11920 DATA 00,00,00,00,00,00,00,00,0  
11930 DATA 00,00,00,00,00,00,00,00,0  
11940 DATA 00,00,00,00,00,00,00,00,0  
11950 DATA 00,00,00,00,00,00,00,00,0  
11960 DATA 00,00,00,00,00,00,00,00,0  
11970 DATA 00,00,00,00,00,00,00,00,0  
11980 DATA 00,00,00,00,00,00,00,00,0  
11990 DATA 00,00,00,00,00,00,00,00,0  
12000 DATA 00,00,00,00,00,00,00,00,0  
12010 DATA 00,00,00,00,00,00,00,00,0  
12020 DATA 00,00,00,00,00,00,00,00,0  
12030 DATA 00,00,00,00,00,00,00,00,0  
12040 DATA 00,00,00,00,00,00,00,00,0  
12050 DATA 00,00,00,00,00,00,00,00,0  
12060 DATA 00,00,00,00,00,00,00,00,0  
12070 DATA 00,00,00,00,00,00,00,00,0  
12080 DATA 00,00,00,00,00,00,00,00,0  
12090 DATA 00,00,00,00,00,00,00,00,0  
12100 DATA 00,00,00,00,00,00,00,00,0  
12110 DATA 00,00,00,00,00,00,00,00,0  
12120 DATA 00,00,00,00,00,00,00,00,0  
12130 DATA 00,00,00,00,00,00,00,00,0  
12140 DATA 00,00,00,00,00,00,00,00,0  
12150 DATA 00,00,00,00,00,00,00,00,0  
12160 DATA 00,00,00,00,00,00,00,00,0  
12170 DATA 00,00,00,00,00,00,00,00,0  
12180 DATA 00,00,00,00,00,00,00,00,0  
12190 DATA 00,00,00,00,00,00,00,00,0  
12200 DATA 00,00,00,00,00,00,00,00,0  
12210 DATA 00,00,00,00,00,00,00,00,0  
12220 DATA 00,00,00,00,00,00,00,00,0  
12230 DATA 00,00,00,00,00,00,00,00,0  
12240 DATA 00,00,00,00,00,00,00,00,0  
12250 DATA 00,00,00,00,00,00,00,00,0  
12260 DATA 00,00,00,00,00,00,00,00,0  
12270 DATA 00,00,00,00,00,00,00,00,0  
12280 DATA 00,00,00,00,00,00,00,00,0  
12290 DATA 00,00,00,00,00,00,00,00,0  
12300 DATA 00,00,00,00,00,00,00,00,0  
12310 DATA 00,00,00,00,00,00,00,00,0  
12320 DATA 00,00,00,00,00,00,00,00,0  
12330 DATA 00,00,00,00,00,00,00,00,0  
12340 DATA 00,00,00,00,00,00,00,00,0  
12350 DATA 00,00,00,00,00,00,00,00,0  
12360 DATA 00,00,00,00,00,00,00,00,0  
12370 DATA 00,00,00,00,00,00,00,00,0  
12380 DATA 00,00,00,00,00,00,00,00,0  
12390 DATA 00,00,00,00,00,00,00,00,0  
12400 DATA 00,00,00,00,00,00,00,00,0  
12410 DATA 00,00,00,00,00,00,00,00,0  
12420 DATA 00,00,00,00,00,00,00,00,0  
12430 DATA 00,00,00,00,00,00,00,00,0  
12440 DATA 00,00,00,00,00,00,00,00,0  
12450 DATA 00,00,00,00,00,00,00,00,0  
12460 DATA 00,00,00,00,00,00,00,00,0  
12470 DATA 00,00,00,00,00,00,00,00,0  
12480 DATA 00,00,00,00,00,00,00,00,0  
12490 DATA 00,00,00,00,00,00,00,00,0  
12500 DATA 00,00,00,00,00,00,00,00,0  
12510 DATA 00,00,00,00,00,00,00,00,0  
12520 DATA 00,00,00,00,00,00,00,00,0  
12530 DATA 00,00,00,00,00,00,00,00,0

12540 DATA 00,00,00,00,00,00,00,00,0  
12550 DATA 00,00,00,00,00,00,00,00,0  
12560 DATA 00,00,00,00,00,00,00,00,0  
12570 DATA 00,00,00,00,00,00,00,00,0  
12580 DATA 00,00,00,00,00,00,00,00,0  
12590 DATA 00,00,00,00,00,00,00,00,0  
12600 DATA 00,00,00,00,00,00,00,00,0  
12610 DATA 00,00,00,00,00,00,00,00,0  
12620 DATA 00,00,00,00,00,00,00,00,0  
12630 DATA 00,00,00,00,00,00,00,00,0  
12640 DATA 00,00,00,00,00,00,00,00,0  
12650 DATA 00,00,00,43,4F,4E,47,52,377  
12660 DATA 45,54,55,4C,41,54,49,4F,611  
12670 DATA 4E,53,21,21,21,20,59,4F,468  
12680 DATA 55,20,48,41,56,45,20,47,512  
12690 DATA 41,49,4E,45,44,20,41,20,482  
12700 DATA 20,20,20,50,4C,41,43,45,453  
12710 DATA 20,49,4E,20,54,40,45,20,472  
12720 DATA 40,49,47,40,20,53,43,4F,549  
12730 DATA 52,45,20,54,41,42,4C,45,543  
12740 DATA 20,20,20,20,20,20,20,20,256  
12750 DATA 20,20,20,04,00,50,4C,45,344  
12760 DATA 41,53,45,20,45,4E,54,45,549  
12770 DATA 52,20,59,4F,55,52,20,4E,559  
12780 DATA 41,40,45,20,42,45,4C,4F,553  
12790 DATA 57,20,3A,20,20,20,20,20,358  
12800 DATA 20,20,20,20,3E,3E,3E,3E,346  
12810 DATA 3E,20,20,20,20,20,20,20,286  
12820 DATA 20,20,20,20,20,20,20,20,256  
12830 DATA 20,20,20,20,20,20,20,20,256  
12840 DATA 20,20,20,20,20,20,20,20,256  
12850 DATA 20,3C,3C,3C,3C,30,30,34,428  
12860 DATA 31,30,30,3A,30,30,30,30,389  
12870 DATA 30,30,30,30,30,32,35,394  
12880 DATA 30,30,30,32,34,30,30,30,390  
12890 DATA 32,35,30,30,30,32,30,30,391  
12900 DATA 30,30,31,30,30,39,39,31,412  
12910 DATA 39,39,00,00,00,00,00,00,114  
12920 DATA 00,00,00,00,00,00,00,00,0  
12930 DATA 00,00,00,00,00,00,00,00,0  
12940 DATA 00,00,00,00,00,00,00,00,0  
12950 DATA 00,00,00,00,00,00,00,00,0  
12960 DATA 00,00,00,00,00,00,00,00,0  
12970 DATA 00,00,00,00,00,00,00,00,0  
12980 DATA 00,00,00,00,00,00,00,00,0  
12990 DATA 00,00,00,00,00,00,00,00,0  
13000 DATA 00,00,00,00,00,00,00,00,0  
13010 DATA 00,00,00,00,00,00,00,00,0  
13020 DATA 76,76,76,00,00,00,00,00,0  
13030 DATA C0,19,00,00,00,00,00,00,0  
13040 DATA 09,55,3C,32,09,57,7F,04,828  
13050 DATA 76,76,76,76,16,1F,1C,40,1126  
13060 DATA 6F,3E,02,03,79,70,02,79,1011  
13070 DATA 00,22,0A,55,00,21,00,00,004  
13080 DATA 00,21,00,00,00,21,00,00,508  
13090 DATA 00,21,00,00,00,21,00,00,508  
13100 DATA 00,21,00,00,00,21,00,00,508  
13110 DATA 00,21,00,00,00,21,00,00,508  
13120 DATA 25,10,02,03,76,21,5C,07,971  
13130 DATA 76,09,00,66,77,4F,0B,9E,1275  
13140 DATA 00,3E,02,03,00,00,3E,0C,861  
13150 DATA C0,5A,00,00,36,62,21,05,1229  
13160 DATA 6F,06,0C,00,15,5C,05,3E,926  
13170 DATA 03,00,90,00,09,06,51,00,1056  
13180 DATA 15,5C,21,0A,01,0C,75,00,666  
13190 DATA 0E,00,11,25,76,21,0E,70,561  
13200 DATA 0E,06,05,00,15,5C,3E,30,674  
13210 DATA C0,5A,00,3E,20,0C,5A,00,1058  
13220 DATA 0E,06,20,00,15,5C,3E,00,666  
13230 DATA C0,5A,00,3E,0A,0C,5A,00,1056  
13240 DATA C0,5A,00,00,02,58,77,00,1069  
13250 DATA A0,62,0C,AA,76,09,AF,32,1191  
13260 DATA 03,58,11,0C,5A,21,25,76,654  
13270 DATA 06,05,11,0C,5A,05,76,4F,692  
13280 DATA 1A,09,CA,83,77,12,9F,77,1177  
13290 DATA FA,87,77,23,13,0F,EF,11,1038  
13300 DATA 01,05,00,09,3A,83,58,3C,352

## Program 4

```
3 REM program 4
6 PRINT"Program 4 is running:"PRINT"Work
  ing on line"
10 valid$="0123456789ABCDEF":ln=11500
20 x=29160
30 FOR y=0 TO 7
40 READ num$ IF num$="***" THEN 110
50 IF INSTR(valid$,LEFT$(num$,1)) OR INS
  TR (valid$,RIGHT$(num$,1)) THEN num$=
  ALL("0"+num$):POKE xty,num ELSE 120
60 chk=chk+num
70 NEXT:ln=ln+10
80 READ check:IF chk<>check THEN 130
90 chk=0
95 PRINT ln;CHR$(11)
100 x=x+8:GOTO 30
110 PRINT"bytes":xty
115 RUN"program5
120 PRINT"invalid character in line ":"ln
  =EB
130 PRINT"checksum error in line ":"ln:EN
  B
11500 DATA 00,00,00,00,00,00,00,00,0
11510 DATA 00,00,00,00,00,00,00,00,0
11520 DATA 00,00,00,00,00,00,00,00,0
11530 DATA 00,00,00,00,00,00,00,00,0
11540 DATA 00,00,00,00,00,00,00,00,0
11550 DATA 00,00,00,00,00,00,00,00,0
11560 DATA 00,00,00,00,00,00,00,00,0
11570 DATA 00,00,00,00,00,00,00,00,0
11580 DATA 00,00,00,00,00,00,00,00,0
11590 DATA 00,00,00,00,00,00,00,00,0
11600 DATA 00,00,00,00,00,00,00,00,0
11610 DATA 00,00,00,00,00,00,00,00,0
11620 DATA 00,00,00,00,00,00,00,00,0
11630 DATA 00,00,00,00,00,00,00,00,0
11640 DATA 00,00,00,00,00,00,00,00,0
11650 DATA 00,00,00,00,00,00,00,00,0
11660 DATA 00,00,00,00,00,00,00,00,0
11670 DATA 00,00,00,00,00,00,00,00,0
11680 DATA 00,00,00,00,00,00,00,00,0
11690 DATA 00,00,00,00,00,00,00,00,0
11700 DATA 00,00,00,00,00,00,00,00,0
11710 DATA 00,00,00,00,00,00,00,00,0
11720 DATA 00,00,00,00,00,00,00,00,0
11730 DATA 00,00,00,00,00,00,00,00,0
11740 DATA 00,00,00,00,00,00,00,00,0
11750 DATA 00,00,00,00,00,00,00,00,0
11760 DATA 00,00,00,00,00,00,00,00,0
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13318 DATA 32,83,58,FE,08,C2,78,7F,956
13328 DATA 09,11,6E,75,E1,E5,01,28,938
13338 DATA 80,ED,80,01,03,13,13,892
13348 DATA 13,15,21,6E,75,01,28,337
13358 DATA 0D,08,01,21,8C,5A,01,05,891
13368 DATA 80,ED,80,CD,FA,77,5A,83,1178
13378 DATA 58,3C,47,11,28,80,21,8E,491
13388 DATA 78,19,18,FD,22,92,5A,11,693
13398 DATA 13,73,01,2C,01,ED,08,2A,859
13408 DATA 92,74,81,28,08,89,ED,21,946
13418 DATA 13,73,01,2C,01,ED,08,21,858
13428 DATA 92,73,ED,58,92,5A,01,20,922
13438 DATA 80,ED,80,C9,CO,86,62,CO,13356
13448 DATA 80,80,3E,01,CO,8E,CO,21,698
13458 DATA 80,81,CO,75,8B,21,83,75,801
13468 DATA 86,42,CO,15,5C,21,02,73,844
13478 DATA 11,03,73,01,21,88,36,28,463
13488 DATA ED,80,AF,32,8B,5A,3E,01,938
13498 DATA CO,96,88,CO,AE,62,21,8E,1866
13508 DATA ES,CO,75,8B,21,02,73,86,878
13518 DATA 28,CO,15,5C,3A,8B,5A,CO,835
13528 DATA 85,67,2E,8E,CO,75,80,3E,739
13538 DATA CF,CO,5A,8B,CO,86,08,FE,1341
13548 DATA 7F,CA,7F,78,FE,8D,CA,6E,1155
13558 DATA 78,ED,7F,47,E6,ED,CA,26,1242
13568 DATA 78,3A,8B,5A,5F,16,08,21,557
13578 DATA 92,73,19,78,3C,32,8B,5A,881
13588 DATA FE,28,C2,26,78,C9,3A,8B,1836
13598 DATA 5A,47,CO,21,39,55,11,02,855
13608 DATA 73,01,1E,80,ED,80,C9,3A,818
13618 DATA 80,5A,47,C2,8E,78,3E,07,921
13628 DATA CO,5A,8B,C3,26,78,31,32,946
13638 DATA 8B,5A,5F,16,88,21,02,73,784
13648 DATA 19,36,28,C3,26,78,01,80,465
13658 DATA 80,ED,83,08,8F,FA,01,88,631
13668 DATA 79,18,78,12,7F,8B,3E,01,478
13678 DATA 32,9E,78,AF,32,AD,78,CO,1851
13688 DATA 47,8C,21,88,79,22,47,78,966
13698 DATA 21,18,79,22,47,78,21,12,548
13708 DATA 7F,22,4B,78,C3,48,79,7E,958
13718 DATA 32,47,78,23,7E,FE,FF,CO,1281
13728 DATA 32,42,78,23,7E,32,45,888
13738 DATA 25,7E,32,46,78,23,7E,52,788
13748 DATA 9E,78,23,23,ES,21,9E,78,888
13758 DATA CO,AA,8C,E1,C9,2A,AD,78,1322
13768 DATA 3E,87,32,4A,78,CO,CF,78,935
13778 DATA 22,48,7E,5A,9E,7E,FE,9E,1041
13788 DATA FF,CO,32,AD,78,C9,2A,AF,1288
13798 DATA 78,3E,87,32,4A,78,CO,78,935
13808 DATA 78,22,47,78,3A,9E,7E,983
13818 DATA FE,FF,C8,32,AD,78,C9,2A,1287
13828 DATA A9,78,3E,87,32,4A,78,CO,897
13838 DATA CF,78,3A,9E,7E,22,47,78,986
13848 DATA 7E,FE,FF,C8,32,AD,78,C9,1371
13858 DATA CO,89,8B,8B,3E,01,CO,AD,1858
13868 DATA 8C,ED,3F,FE,84,CC,0E,79,1878
13878 DATA 3E,82,C9,AD,8C,6E,3F,FE,1177
13888 DATA 84,CC,27,79,3E,84,CO,AD,812
13898 DATA 8C,ED,3F,FE,84,CC,15,78,1388
13908 DATA 3E,87,CO,83,CO,3A,AD,78,992
13918 DATA A7,CA,48,79,C9,86,08,78,879
13928 DATA 18,F9,3E,87,CO,83,CO,86,916
13938 DATA 1E,CO,19,80,18,F8,C9,C9,1118
13948 DATA 9F,08,1E,08,01,80,9F,80,349
13958 DATA 1E,08,01,80,49,08,1E,80,238
13968 DATA 1E,08,05,08,1E,08,01,80,245
13978 DATA BE,8F,08,31,08,49,08,423
13988 DATA 8F,8F,08,01,80,0E,08,221
13998 DATA 01,80,49,08,8F,08,01,80,186
14008 DATA 05,08,1E,08,01,FO,80,497
14018 DATA 1E,08,01,80,EF,8F,08,285
14028 DATA 1E,08,05,08,8F,08,01,80,278
14038 DATA EF,8F,8F,08,01,80,05,80,468
14048 DATA 8F,08,01,80,FO,1E,80,299
14058 DATA 01,80,CO,01,1E,80,01,80,61
14068 DATA 3F,01,1E,80,31,08,78,01,267
14078 DATA 3C,08,01,80,3F,01,8F,80,148
14088 DATA 01,80,52,01,8F,08,01,80,188
14098 DATA 78,01,8F,08,31,80,52,01,271
14108 DATA 8F,08,01,80,78,01,8F,08,155
14118 DATA 01,80,52,01,8F,08,01,80,188
14128 DATA AA,01,1E,08,01,80,3F,81,266
14138 DATA 8F,08,01,80,32,01,8F,08,114
14148 DATA 01,80,78,01,8F,08,31,80,189
14158 DATA 52,01,8F,08,78,01,8F,08,223
14168 DATA 8F,08,01,80,32,01,8F,08,114
14178 DATA 01,80,AA,01,1E,08,01,80,283
14188 DATA AA,01,8F,08,01,80,78,81,311
14198 DATA 8F,08,01,80,32,01,8F,08,114
14208 DATA 31,80,3F,01,8F,08,08,129
14218 DATA 1C,01,8F,08,01,80,FO,80,298
14228 DATA 8F,08,01,80,EF,8F,08,278
14238 DATA 01,80,FB,08,8F,08,01,80,278
14248 DATA EF,8F,8F,08,01,80,35,80,488
14258 DATA 8F,8F,01,80,FO,1E,80,299
14268 DATA 31,80,3F,01,3C,08,08,174
14278 DATA 1C,01,8F,08,01,80,FO,80,298
14288 DATA 8F,08,01,80,E1,80,08,256
14298 DATA 31,80,35,08,8F,08,01,80,278
14308 DATA 8E,8F,8F,08,01,80,49,80,375
14318 DATA 8F,08,08,9F,08,08,8F,80,198
14328 DATA 01,80,49,80,8F,08,01,80,186
14338 DATA 9F,08,8F,08,01,80,8E,317
14348 DATA 8F,08,01,80,49,80,1E,08,215
14358 DATA 31,80,35,08,44,08,01,80,331
14368 DATA 8E,8F,1E,80,31,80,8E,80,459
14378 DATA 1E,08,01,80,8E,8F,08,236
14388 DATA 01,80,49,80,8F,08,01,80,186
14398 DATA 9F,8F,8F,08,01,80,8E,317
14408 DATA 8F,8F,08,9F,08,01,80,198
14418 DATA 31,80,49,80,8F,08,01,80,234
14428 DATA 8E,8F,8F,08,01,80,49,80,375
14438 DATA 8F,08,01,80,9F,08,1E,80,285
14448 DATA 01,80,35,08,1E,80,01,80,245
14458 DATA EF,8E,1E,80,31,80,EF,80,557
14468 DATA 1E,80,01,80,EF,08,8F,80,285
14478 DATA 01,80,35,08,8F,08,01,80,238
14488 DATA BE,8F,8F,08,01,80,49,80,375
14498 DATA 8F,8F,01,80,8E,8F,08,221
14508 DATA 31,80,C9,8F,08,01,80,266
14518 DATA 01,80,8F,08,01,80,C9,442
14528 DATA 8F,08,01,80,8E,8F,08,236
14538 DATA 08,78,01,8F,08,01,80,141
14548 DATA 52,01,8F,08,01,80,3F,81,163
14558 DATA 8F,08,01,80,52,01,80,162
14568 DATA 01,80,78,01,8F,08,01,80,141
14578 DATA 52,01,8F,08,01,80,3F,81,163
14588 DATA 1E,08,01,80,3F,81,8F,08,118
14598 DATA 1E,08,1C,01,8F,08,01,80,46
14608 DATA FO,80,8F,08,31,80,1C,81,346
14618 DATA 8F,08,01,80,3F,81,8F,08,95
14628 DATA 01,80,1C,8F,8F,08,01,80,46
14638 DATA FO,80,1E,80,01,80,FO,80,537
14648 DATA 1E,08,01,80,FO,80,8F,08,299
14658 DATA 31,01,1C,8F,08,01,80,94
14668 DATA 3F,8F,8F,08,01,80,1C,81,189
14678 DATA 8F,08,01,80,FO,1E,80,299
14688 DATA 01,80,8E,8F,08,1E,80,08,222
14698 DATA FO,80,1E,80,31,80,78,01,456
14708 DATA 1E,08,01,80,78,81,1E,80,185
14718 DATA 01,80,3F,81,8F,08,01,80,81
14728 DATA 1C,8F,8F,08,01,80,FO,80,298
14738 DATA 8F,8F,31,80,1C,8F,08,188
14748 DATA 01,80,3F,81,8F,08,01,80,81
14758 DATA 1C,8F,8F,08,01,80,FO,80,298
14768 DATA 1E,08,01,80,FO,80,8F,08,299
14778 DATA 08,01,80,8F,08,01,80,242
14788 DATA 05,8F,8F,31,80,E1,80,582
14798 DATA 8F,08,01,80,FO,80,8F,08,284
14808 DATA 01,80,E1,80,8F,08,01,80,242
14818 DATA 05,8F,1E,80,01,80,9F,80,483
14828 DATA 8F,08,01,80,9F,80,8F,08,198
14838 DATA 01,80,49,80,8F,08,31,80,234
14848 DATA 8E,8F,8F,08,01,80,35,80,419
14858 DATA 8F,8F,01,80,8E,8F,08,221
14868 DATA 08,08,49,80,1E,08,01,80,281
14878 DATA 7E,80,1E,80,08,08,49,327
14888 DATA 1E,80,31,80,FO,80,1E,80,362
14898 DATA 08,80,FB,08,1E,80,01,80,285
14908 DATA 05,80,8F,08,81,80,8E,419
14918 DATA 8F,80,01,80,49,80,81,80,288
14928 DATA 31,80,8E,8F,08,01,80,255
14938 DATA 05,80,8F,08,81,80,8E,419
14948 DATA 8F,80,81,80,49,80,1E,80,215
14958 DATA 81,80,7F,08,1E,80,01,80,159
14968 DATA 8E,80,1E,80,01,80,9F,80,388
14978 DATA 1E,80,81,80,8E,80,1E,80,251
14988 DATA 7E,82,8F,08,1E,80,01,80,281
14998 DATA 7E,82,8F,8F,31,80,44,82,358
15008 DATA ***

```

## Program 5

```

5 REM program5
6 PRINT "Program 5 is running":PRINT "Working on line"
10 valid$="0123456789ABCDEF":(n:=15000
20 x:=1968
30 FOR y=0 TO 7
40 READ num:IF num<<0 THEN 110
50 IF INSTR(valid$,LEFT$(num$,1)) OR INSTR
(valid$,RIGHT$(num$,1)) THEN num=V
AL$(num$)+num:POKE x+y,num ELSE 120
60 chk=chk+num
70 NEXT n:ln=ln+1
80 READ check:IF chk<>check THEN 130
90 chk=0
95 PRINT (n/CHR$(11)
100 x++:GOTO 30
110 PRINT "bytes":xxy
115 RUN:program5
120 PRINT "Invalid character in line ":(ln
:END
130 PRINT "Checksum error in line ":(ln:IN

```

```

15000 DATA 8F,8F,01,80,8E,8F,08,279
15010 DATA 01,80,53,83,8F,08,01,80,183
15020 DATA 8C,83,8F,08,01,80,FA,83,454
15030 DATA 8F,8F,01,80,78,84,8F,08,147
15040 DATA 01,80,80,3C,80,31,80,118
15050 DATA 80,80,3C,80,31,80,80,189
15060 DATA 3C,80,01,80,FF,FF,FF,8F,1881
15070 DATA FO,80,1E,80,82,80,FO,538
15080 DATA 1E,80,82,80,1C,81,80,891
15090 DATA 82,80,52,01,1E,80,82,117
15100 DATA 3F,01,1E,80,2A,80,3F,81,288
15110 DATA 1E,80,82,80,3F,81,1E,80,126
15120 DATA 82,80,3F,01,1E,80,82,80,98
15130 DATA 3F,01,1E,80,2A,80,3F,81,288
15140 DATA 1E,80,82,80,32,81,1E,80,145
15150 DATA 82,80,52,01,1E,80,82,117
15160 DATA FA,81,1E,80,2A,80,FA,81,574
15170 DATA 3C,80,82,80,FA,81,1E,80,343
15180 DATA 82,80,8E,81,1E,80,2A,80,297

```

15190 DATA DE,01,1E,00,02,00,7E,02,383  
15200 DATA 1E,00,02,00,FA,01,1E,00,313  
15210 DATA 00,00,DE,01,1E,00,2A,00,297  
15220 DATA DE,01,1E,00,02,00,7E,02,383  
15230 DATA 1E,00,02,00,7E,02,1E,00,190  
15240 DATA 02,00,0E,01,1E,00,2A,00,297  
15250 DATA 7B,01,1E,00,02,00,52,01,239  
15260 DATA 1E,00,02,00,52,01,1E,00,145  
15270 DATA 02,00,3F,01,1E,00,2A,00,138  
15280 DATA FA,01,3C,00,02,00,C3,01,509  
15290 DATA 1E,00,02,00,3F,01,1E,00,126  
15300 DATA 2A,00,3F,01,1E,00,02,00,138  
15310 DATA 1E,00,02,00,01,1E,00,402  
15320 DATA 1E,00,02,00,15,0E,00,275  
15330 DATA 2A,00,52,01,44,00,02,00,195  
15340 DATA 20,01,1E,00,2A,00,20,01,164  
15350 DATA 1E,00,02,00,1C,01,1E,00,091  
15360 DATA 02,0E,1C,01,1E,00,02,00,63  
15370 DATA 52,01,1E,00,2A,00,52,01,238  
15380 DATA 1E,00,02,00,3F,01,1E,00,126  
15390 DATA 02,00,3F,01,1E,00,02,00,98  
15400 DATA 3F,01,1E,00,2A,00,3F,01,200  
15410 DATA 1E,00,02,00,1C,01,1E,00,091  
15420 DATA 02,0E,1C,01,1E,00,02,00,63  
15430 DATA 92,01,1E,00,2A,00,92,01,366  
15440 DATA 1E,00,02,00,7B,01,1E,00,186  
15450 DATA 0E,00,0E,01,1E,00,02,00,257  
15460 DATA FA,01,3C,00,2A,00,FA,01,604  
15470 DATA 3C,00,02,00,7E,02,3C,00,258  
15480 DATA 2A,00,7E,02,3C,00,02,00,232  
15490 DATA 7E,02,3C,00,2A,00,7E,02,358  
15500 DATA 3C,00,02,00,7E,02,0F,00,205  
15510 DATA 7E,02,7E,02,0F,00,02,00,187  
15520 DATA 7E,02,0F,00,02,00,00,145  
15530 DATA 0F,00,02,00,7E,02,3C,00,285  
15540 DATA 2A,00,7E,02,3C,00,02,00,232  
15550 DATA FA,01,3C,00,2A,00,FA,01,604  
15560 DATA 3C,00,02,00,AA,01,3C,00,293  
15570 DATA 2A,00,AA,01,3C,00,02,00,275  
15580 DATA AA,02,3C,00,2A,00,AA,02,434  
15590 DATA 3C,00,02,00,AA,01,3C,00,293  
15600 DATA 2A,00,AA,01,3C,00,02,00,275  
15610 DATA 52,01,1E,00,2A,00,52,00,408  
15620 DATA 1E,00,02,00,3F,01,1E,00,126  
15630 DATA 02,00,0F,00,1E,00,02,00,273  
15640 DATA 9F,00,0F,00,1C,00,A9,00,371  
15650 DATA 0F,00,04,00,0E,00,0F,00,224  
15660 DATA 04,00,05,00,0F,00,04,00,236  
15670 DATA 0F,00,0F,00,04,00,0F,00,511  
15680 DATA 0F,00,04,00,1C,01,0F,00,63  
15690 DATA 04,00,00,00,3C,00,2A,00,186  
15700 DATA 00,00,3C,00,2A,00,FF,FF,612  
15710 DATA FF,FF,7E,02,1E,00,04,00,672  
15720 DATA 7E,02,1E,00,04,00,AA,01,333  
15730 DATA 1E,00,0E,00,AA,01,1E,00,235  
15740 DATA 04,00,3A,01,1E,00,1C,00,205  
15750 DATA DE,01,1E,00,04,00,7E,02,385  
15760 DATA 1E,00,04,00,7E,02,1E,00,192  
15770 DATA 04,00,38,02,1E,00,00,128  
15780 DATA 38,02,1E,00,04,00,53,03,178  
15790 DATA 1E,00,04,00,53,03,1E,00,158  
15800 DATA 04,00,7E,02,1E,00,1C,00,198  
15810 DATA 7E,02,3C,00,04,00,7E,02,328  
15820 DATA 1E,00,04,00,0C,03,1E,00,255  
15830 DATA 1C,00,0C,03,1E,00,04,00,253  
15840 DATA FA,03,1E,00,04,00,7E,02,409  
15850 DATA 1E,00,04,00,0C,03,1E,00,255  
15860 DATA 1C,00,0C,03,1E,00,04,00,253  
15870 DATA FA,03,1E,00,04,00,7E,02,409  
15880 DATA 1E,00,04,00,7B,04,1E,00,180  
15890 DATA 1C,00,0C,03,1E,00,04,00,253  
15900 DATA 53,03,1E,00,04,00,53,03,206  
15910 DATA 1E,00,04,00,7E,02,1E,00,192  
15920 DATA 1C,00,7E,02,3C,00,04,00,220  
15930 DATA 7E,02,1E,00,04,00,7E,02,410  
15940 DATA 1E,00,1C,00,FA,02,1E,00,336  
15950 DATA 04,00,38,02,1E,00,04,00,96  
15960 DATA 38,02,1E,00,04,00,53,03,178  
15970 DATA 1E,00,1C,00,AA,01,5A,00,319  
15980 DATA 00,00,AA,01,1E,00,1C,00,233  
15990 DATA AA,01,1E,00,04,00,DE,01,428  
16000 DATA 1E,00,04,00,DE,01,1E,00,285  
16010 DATA 0E,00,0E,01,1E,00,1C,00,287  
16020 DATA DE,01,1E,00,04,00,FA,01,508  
16030 DATA 1E,00,04,00,FA,01,1E,00,315  
16040 DATA 04,00,3B,02,1E,00,1C,00,120  
16050 DATA 3B,02,1E,00,04,00,AA,02,258  
16060 DATA 1E,00,04,00,AA,02,1E,00,230  
16070 DATA 04,00,3B,02,1E,00,1C,00,120  
16080 DATA 3B,02,1E,00,04,00,7E,02,220  
16090 DATA 1E,00,04,00,7E,02,1E,00,192  
16100 DATA 04,00,7E,02,3C,00,1C,00,340  
16110 DATA FA,02,3C,00,04,00,53,03,398  
16120 DATA 04,00,1C,00,53,03,3C,00,234  
16130 DATA 3C,00,06,03,3C,00,1C,00,229  
16140 DATA 06,03,3C,00,04,00,7E,02,449  
16150 DATA 1E,00,1C,00,7E,02,1E,00,336  
16160 DATA 04,00,00,00,1E,00,04,00,38  
16170 DATA 06,03,3C,00,1C,00,06,03,362  
16180 DATA 3C,00,04,00,53,03,3C,00,210  
16190 DATA 1C,00,53,03,3C,00,04,00,178  
16200 DATA AA,02,3C,00,1C,00,AA,02,428  
16210 DATA 3C,00,04,00,53,03,3C,00,210  
16220 DATA 1C,00,53,03,3C,00,04,00,178  
16230 DATA AA,02,3C,00,1C,00,AA,02,428  
16240 DATA 3C,00,04,00,DE,01,1E,00,317  
16250 DATA 1C,00,7E,02,1E,00,04,00,198  
16260 DATA 0E,01,1E,00,04,00,AA,01,428  
16270 DATA 1E,00,04,00,3F,01,0F,00,113  
16280 DATA 1C,00,52,01,0F,00,02,128  
16290 DATA 7B,01,0F,00,02,00,AA,01,312  
16300 DATA 0F,00,02,00,DE,01,0F,00,255  
16310 DATA 02,00,FA,01,0F,00,02,00,278  
16320 DATA 38,02,0F,00,02,00,00,00,75  
16330 DATA 3C,00,1C,00,00,00,3C,00,148  
16340 DATA 1C,00,00,00,3C,00,04,00,92  
16350 DATA 04,04,04,04,04,04,04,32  
16360 DATA 04,04,04,04,04,04,04,32  
16370 DATA 04,04,04,04,03,03,02,01,25  
16380 DATA 01,01,02,01,01,01,01,02,18  
16390 DATA 01,01,02,02,01,01,04,04,16  
16400 DATA 03,02,01,01,01,03,02,14  
16410 DATA 01,01,02,01,01,03,01,01,11  
16420 DATA 06,02,04,04,02,01,01,01,21  
16430 DATA 01,01,02,01,01,02,01,01,18  
16440 DATA 01,03,01,01,01,02,04,04,17  
16450 DATA 01,01,01,01,04,04,04,20  
16460 DATA 04,04,04,04,04,04,04,32  
16470 DATA 04,04,04,04,02,03,02,01,24  
16480 DATA 01,02,02,02,01,03,01,13  
16490 DATA 01,01,01,01,03,01,04,04,16  
16500 DATA 02,03,02,01,01,01,02,02,14  
16510 DATA 04,02,03,04,01,01,01,01,17  
16520 DATA 03,01,04,04,02,03,01,20  
16530 DATA 01,01,01,02,04,03,03,04,19  
16540 DATA 01,01,01,01,03,01,04,04,16  
16550 DATA 04,04,04,04,04,04,04,32  
16560 DATA 04,04,04,04,04,01,02,27  
16570 DATA 03,01,04,04,03,02,02,21  
16580 DATA 02,02,02,03,02,02,02,17  
16590 DATA 02,02,01,02,03,01,04,04,19  
16600 DATA 01,01,01,01,01,01,01,01,8  
16610 DATA 01,01,01,01,01,01,01,8  
16620 DATA 03,01,04,04,04,04,04,28  
16630 DATA 04,04,04,04,04,04,04,32  
16640 DATA 04,04,04,04,04,04,04,32  
16650 DATA 03,03,01,01,02,01,03,15  
16660 DATA 06,04,02,04,01,01,03,01,22  
16670 DATA 01,01,04,04,02,02,01,01,16  
16680 DATA 01,01,01,01,01,01,01,8  
16690 DATA 01,01,01,01,02,04,04,15  
16700 DATA 02,03,01,04,04,04,04,26  
16710 DATA 04,04,01,04,04,04,01,01,23  
16720 DATA 02,02,04,04,01,01,01,04,19  
16730 DATA 01,01,01,01,00,00,01,00,5  
16740 DATA 00,04,01,02,02,02,04,04,19  
16750 DATA 02,01,02,04,01,04,04,22  
16760 DATA 00,04,04,04,00,04,01,02,19  
16770 DATA 02,03,04,04,02,01,02,04,19  
16780 DATA 01,04,03,04,00,02,01,04,19  
16790 DATA 00,04,01,02,01,02,04,17  
16800 DATA 01,01,01,01,01,01,01,8  
16810 DATA 01,01,01,01,01,01,01,8  
16820 DATA 01,01,01,01,01,01,01,8  
16830 DATA 01,04,01,01,01,04,01,17  
16840 DATA 03,04,00,01,03,01,04,04,20  
16850 DATA 01,01,01,04,01,04,04,20  
16860 DATA 04,04,01,04,03,04,01,21  
16870 DATA 02,01,04,04,01,03,01,04,21  
16880 DATA 01,01,01,01,01,01,01,8  
16890 DATA 03,04,00,01,01,01,04,04,18  
16900 DATA 04,04,04,04,04,04,04,32  
16910 DATA 04,04,04,04,04,04,04,32  
16920 DATA 04,04,04,04,02,02,01,03,24  
16930 DATA 03,02,02,03,02,02,03,02,19  
16940 DATA 02,01,01,02,03,04,04,21  
16950 DATA 02,01,01,03,03,02,02,16  
16960 DATA 02,03,02,03,02,01,02,05,18  
16970 DATA 04,04,04,04,01,01,01,03,22  
16980 DATA 03,02,02,02,02,03,02,18  
16990 DATA 02,01,01,02,00,04,04,18  
17000 DATA 01,01,01,01,03,02,02,03,14  
17010 DATA 01,03,02,03,01,02,03,14  
17020 DATA 02,04,04,01,02,04,04,25  
17030 DATA 04,04,01,04,04,01,04,26  
17040 DATA 01,03,04,00,00,00,00,00,8  
17050 DATA 04,04,04,04,04,04,04,32  
17060 DATA 00,00,00,00,00,00,00,00,0  
17070 DATA 00,00,04,04,01,02,04,00,15  
17080 DATA 00,00,00,00,00,00,00,00,6  
17090 DATA 00,00,00,00,00,00,04,04,8  
17100 DATA 03,01,04,01,00,00,00,00,9  
17110 DATA 00,00,00,00,03,01,03,7  
17120 DATA 00,00,04,04,03,01,04,01,17  
17130 DATA 01,00,00,00,00,00,00,00,11  
17140 DATA 02,02,01,02,02,00,04,17  
17150 DATA 02,01,04,01,01,01,00,00,10  
17160 DATA 00,00,00,02,02,03,03,13  
17170 DATA 02,02,04,04,04,04,04,28  
17180 DATA 04,04,04,04,04,04,04,32  
17190 DATA 04,04,04,04,04,04,04,32  
17200 DATA 06,01,01,01,01,01,01,13  
17210 DATA 01,01,01,01,01,01,01,8  
17220 DATA 01,01,01,01,02,02,02,15  
17230 DATA 01,02,03,02,01,02,02,15  
17240 DATA 01,02,03,02,01,01,04,04,18  
17250 DATA 01,02,03,01,02,03,02,17  
17260 DATA 01,02,03,03,01,02,03,02,17  
17270 DATA 01,01,04,04,01,02,03,19  
17280 DATA 01,02,02,02,01,02,02,14  
17290 DATA 01,02,02,01,01,04,04,17  
17300 DATA 01,02,03,03,01,01,01,02,14  
17310 DATA 01,02,03,02,01,03,03,02,17  
17320 DATA 01,01,04,04,01,02,02,02,17  
17330 DATA 01,01,01,02,01,02,02,02,12  
17340 DATA 01,01,02,01,01,04,04,15  
17350 DATA 01,01,01,01,01,01,01,8  
17360 DATA 01,01,01,01,01,01,01,8  
17370 DATA 01,01,04,04,01,04,04,23  
17380 DATA 01,02,02,01,02,02,02,01,13  
17390 DATA 02,02,02,01,02,03,04,20  
17400 DATA 01,03,03,03,01,02,03,01,17  
17410 DATA 02,01,02,01,02,01,02,12  
17420 DATA 02,03,04,04,01,04,04,26  
17430 DATA 01,02,02,01,02,02,01,13  
17440 DATA 02,02,02,01,02,02,01,13  
17450 DATA 04,04,04,04,04,04,04,32  
17460 DATA 04,04,04,04,04,04,04,32  
17470 DATA 04,04,04,04,01,01,01,28  
17480 DATA 01,01,01,01,01,06,01,13  
17490 DATA 01,01,01,01,01,01,04,04,14  
17500 DATA 01,01,01,02,01,04,01,12  
17510 DATA 01,01,01,01,01,01,01,8  
17520 DATA 01,01,04,04,01,01,01,14

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17550 DATA 04,00,00,04,01,01,00,00,21
17551 DATA 01,00,00,01,01,01,04,04,23
17552 DATA 02,01,02,01,01,04,04,00,17
17553 DATA 01,01,01,00,01,00,00,01,5
17554 DATA 01,01,04,04,02,03,02,01,12
17555 DATA 01,04,00,00,04,01,01,12
17556 DATA 01,01,01,01,02,01,04,04,15
17557 DATA 02,03,02,01,01,04,04,00,17
17558 DATA 04,01,01,01,01,01,02,12
17559 DATA 03,02,04,04,04,04,01,26
17560 DATA 01,04,00,00,04,01,01,12
17561 DATA 01,02,01,02,02,01,04,04,17
17562 DATA 01,01,04,04,04,04,00,04,22
17563 DATA 04,04,01,01,02,03,03,02,20
17564 DATA 01,01,04,04,01,01,04,00,24
17565 DATA 00,00,00,00,00,04,01,02,15
17566 DATA 03,03,03,03,02,01,04,04,23
17567 DATA 01,01,04,04,04,04,04,04,26
17568 DATA 04,04,02,03,03,03,03,03,25
17569 DATA 03,02,04,04,04,04,04,04,29
17570 DATA 04,04,04,04,04,04,04,04,32
17571 DATA 04,04,04,04,04,04,04,04,32
17572 DATA 06,01,01,01,01,01,01,01,13
17573 DATA 01,01,01,01,01,01,01,01,8
17574 DATA 01,01,04,04,01,04,04,04,23
17575 DATA 01,04,04,04,01,04,04,04,26
17576 DATA 01,04,04,01,04,04,04,26
17577 DATA 01,04,01,04,01,04,00,04,19
17578 DATA 01,04,04,04,01,04,04,04,26
17579 DATA 01,04,00,04,01,04,04,01,30
17580 DATA 01,04,00,04,01,04,04,04,33
17581 DATA 01,04,04,01,01,04,00,04,19
17582 DATA 01,04,01,04,01,04,00,04,19
17583 DATA 01,01,04,04,01,04,01,04,20
17584 DATA 01,04,04,04,01,04,04,04,26
17585 DATA 01,04,04,04,01,04,04,04,26
17586 DATA 01,01,01,01,01,01,01,01,8
17587 DATA 01,01,01,01,01,01,01,01,8
17588 DATA 01,01,04,04,01,02,01,01,15
17589 DATA 01,01,01,01,02,02,01,01,10
17590 DATA 01,02,02,02,01,01,04,04,18
17591 DATA 01,03,02,02,01,01,01,01,12
17592 DATA 01,02,01,01,02,03,03,16
17593 DATA 03,03,04,04,01,03,03,03,24
17594 DATA 02,01,01,01,03,02,01,02,13
17595 DATA 03,03,03,03,03,03,04,04,26
18000 DATA 04,04,04,04,04,04,04,04,32
18001 DATA 04,04,04,04,04,04,04,04,32
18002 DATA 04,04,04,04,02,02,03,03,25
18003 DATA 03,02,03,02,03,03,02,03,21
18004 DATA 02,03,02,02,02,02,04,04,21
18005 DATA 01,02,01,02,03,03,02,02,16
18006 DATA 03,02,02,02,03,02,01,01,16
18007 DATA 02,02,04,04,01,02,01,02,18
18008 DATA 03,02,03,03,02,03,02,03,21
18009 DATA 02,03,01,02,02,02,04,04,20
18010 DATA 01,01,01,01,03,02,03,14
18011 DATA 02,03,02,03,02,02,01,01,12
18012 DATA 01,02,04,04,03,02,04,04,24
18013 DATA 04,04,04,04,04,01,04,04,29
18014 DATA 04,04,04,04,01,03,04,04,28
18015 DATA 01,03,04,00,00,00,00,00,04
18016 DATA 00,00,00,00,00,00,00,04,4
18017 DATA 02,01,04,04,02,01,04,00,18
18018 DATA 00,00,00,00,00,00,00,00,0
18019 DATA 00,04,00,04,03,01,04,04,22
18020 DATA 03,01,04,00,00,00,00,00,4
18021 DATA 00,00,00,00,00,00,00,04,4
18022 DATA 03,03,04,04,03,01,04,00,22
18023 DATA 00,00,00,00,00,00,00,00,0
18024 DATA 00,00,00,04,03,02,04,04,17
18025 DATA 02,02,04,00,00,02,00,18
18026 DATA 02,00,00,00,00,00,00,00,2
18027 DATA 03,01,04,04,04,04,04,04,28
18028 DATA 04,04,04,04,04,04,04,04,32
18029 DATA 04,04,04,04,04,04,04,04,32

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## Program 6

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5 REM program 6
6 PRINT"Program 6 is running":PRINT"Work
ing on line"
10 val$="0123456789ABCDEF":len=18500
20 x=34760
30 FOR y#0 TO 7
40 READ num$:IF num$=""* THEN 110
50 IF INSTR(val$,LEFT$(num$,1)) OR INT
TR (val$,RIGHT$(num$,1)) THEN num$=
ALC(""+num$):POKE x+y,num ELSE 120
60 chk=chk+num
70 NEXT:ln=ln+10
80 READ chk$:IF chk$=chk THEN 130
90 chk=0
95 PRINT ln:CHR$(11)
100 x=x+8:GOTO 30
110 PRINT"bytest":zxy
115 RUN"program"
120 PRINT"Invalid character in line ":"ln:
:cmd
130 PRINT"Checksum error in line ":"ln:
: d
18500 DATA 01,04,01,04,03,03,02,03,21
18510 DATA 04,03,04,01,04,01,04,02,23
18520 DATA 04,01,01,01,01,01,01,01,11
18530 DATA 01,03,02,02,01,01,01,01,12
18540 DATA 01,01,01,03,01,01,04,04,16
18550 DATA 04,04,04,04,04,04,04,04,32
18560 DATA 04,04,04,04,04,04,04,04,32
18570 DATA 04,04,04,04,01,01,01,01,20
18580 DATA 01,01,01,01,01,01,01,02,9
18590 DATA 01,01,02,02,02,02,04,04,19
18600 DATA 01,04,02,02,02,02,02,02,16
18610 DATA 04,01,01,02,01,01,02,03,15
18620 DATA 03,03,04,04,01,04,01,21
18630 DATA 02,01,01,04,02,01,01,02,14
18640 DATA 01,01,02,02,02,02,04,04,18
18650 DATA 01,02,01,04,03,03,04,01,19
18660 DATA 02,01,03,01,03,02,02,15
18670 DATA 02,02,04,04,01,01,01,03,17
18680 DATA 04,04,03,01,02,01,01,01,17
18690 DATA 01,01,01,01,01,01,04,04,14
18700 DATA 01,02,01,03,04,04,03,01,19
18710 DATA 02,01,02,01,01,01,01,01,18
18720 DATA 01,01,04,04,01,02,01,04,18
18730 DATA 03,03,04,01,02,01,01,01,16

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19518 DATA 02,01,02,03,01,01,01,04,15  
19520 DATA 01,01,04,04,02,04,01,02,10  
19538 DATA 01,02,01,02,01,01,01,01,10  
19548 DATA 02,01,01,04,02,04,04,04,22  
19550 DATA 02,04,01,01,01,01,01,02,15  
19556 DATA 03,01,01,01,03,01,01,04,15  
19570 DATA 02,04,04,04,02,04,01,02,23  
19588 DATA 01,01,01,01,01,01,02,01,21  
19598 DATA 01,02,01,04,02,04,04,04,22  
19600 DATA 01,01,04,04,04,04,04,01,23  
19610 DATA 04,04,04,04,04,04,04,01,29  
19620 DATA 01,01,04,04,01,01,01,01,14  
19638 DATA 01,01,01,01,01,01,01,01,8  
19648 DATA 01,01,01,01,01,01,04,04,14  
19658 DATA 04,04,04,04,04,04,04,04,32  
19668 DATA 04,04,04,04,04,04,04,04,32  
19670 DATA 04,04,04,04,06,01,01,01,25  
19680 DATA 01,01,01,01,01,01,01,01,8  
19690 DATA 01,01,01,01,01,01,04,04,14  
19700 DATA 01,01,01,01,01,01,01,01,8  
19710 DATA 01,01,01,01,01,01,01,01,8  
19720 DATA 01,01,04,04,01,01,00,00,12  
19730 DATA 00,01,00,00,00,01,00,00,2  
19740 DATA 00,01,00,00,00,01,04,10  
19750 DATA 01,01,00,00,00,01,00,00,14  
19760 DATA 00,01,00,00,00,01,00,00,27  
19770 DATA 00,01,04,04,01,01,00,00,25  
19780 DATA 00,01,05,00,00,01,00,00,5  
19790 DATA 03,01,00,00,00,01,04,04,13  
19800 DATA 01,01,01,01,01,01,01,01,8  
19810 DATA 01,01,01,01,01,01,01,01,8  
19820 DATA 01,01,04,04,01,00,00,00,11  
19830 DATA 01,01,00,00,01,01,00,00,4  
19840 DATA 03,01,01,04,01,01,04,04,19  
19850 DATA 01,00,00,00,00,00,00,00,23  
19860 DATA 01,01,00,01,00,01,04,04,23  
19870 DATA 04,01,04,04,01,05,00,00,17  
19880 DATA 01,01,00,00,01,01,00,00,04  
19890 DATA 00,01,01,04,01,01,04,04,16  
19900 DATA 01,01,01,01,01,01,01,01,8  
19910 DATA 01,01,01,01,01,01,01,04,11  
19920 DATA 01,01,04,04,04,04,04,04,26  
19930 DATA 04,04,04,04,04,04,04,04,32  
19940 DATA 04,04,04,04,04,04,04,04,32  
19950 DATA 03,03,02,01,01,06,01,01,18  
19960 DATA 01,01,02,01,02,01,01,01,10  
19970 DATA 02,02,04,04,05,02,01,01,19  
19980 DATA 01,04,04,03,04,01,01,01,17  
19990 DATA 02,01,01,01,02,02,04,17  
20000 DATA 02,01,01,01,04,01,02,01,13  
20010 DATA 01,04,01,01,02,01,02,01,13  
20020 DATA 01,05,04,04,01,01,02,04,20  
20030 DATA 04,03,02,01,01,03,04,04,22  
20040 DATA 01,01,02,01,01,03,04,04,17  
20050 DATA 01,01,02,04,04,04,04,17  
20060 DATA 04,04,04,04,01,01,03,01,22  
20070 DATA 01,01,04,04,00,00,04,01,15  
20080 DATA 01,01,01,03,01,03,02,01,15  
20090 DATA 02,01,01,01,01,02,04,17  
20100 DATA 00,04,04,01,02,01,01,02,15  
20110 DATA 01,02,03,02,04,04,01,01,18  
20120 DATA 02,01,04,04,03,04,01,01,20  
20130 DATA 02,02,01,02,01,01,01,01,11  
20140 DATA 03,04,01,01,02,01,04,04,20  
20150 DATA 04,04,04,04,04,04,04,04,32  
20160 DATA 04,04,04,04,04,04,04,01,29  
20170 DATA 01,01,04,04,01,01,01,05,16  
20180 DATA 00,00,00,00,00,00,03,01,12  
20190 DATA 01,01,01,01,01,01,04,04,14  
20200 DATA 04,04,04,04,04,04,04,04,32  
20210 DATA 04,04,04,04,04,04,04,04,32  
20220 DATA 04,04,04,04,02,02,02,02,24  
20230 DATA 02,02,01,02,02,02,02,02,15  
20240 DATA 02,02,02,02,02,02,04,20  
20250 DATA 02,01,01,01,01,01,01,01,8  
20260 DATA 02,02,02,02,02,01,01,01,13  
20270 DATA 01,01,04,04,01,01,01,05,16

20280 DATA 02,03,01,01,01,02,02,02,14  
20290 DATA 01,01,01,01,01,01,04,04,14  
20300 DATA 01,01,01,01,01,01,01,01,8  
20310 DATA 01,01,01,01,01,01,01,01,8  
20320 DATA 01,01,04,04,01,01,01,01,14  
20330 DATA 01,01,01,01,01,01,01,01,8  
20340 DATA 06,01,01,01,01,01,04,04,19  
20350 DATA 01,01,04,04,04,04,04,04,26  
20360 DATA 04,04,04,04,04,04,04,01,29  
20370 DATA 01,01,04,04,01,04,03,00,29  
20380 DATA 00,00,00,00,00,00,00,00,66  
20390 DATA 00,00,00,01,01,01,04,04,33  
20400 DATA 01,01,04,02,02,02,02,16  
20410 DATA 02,02,02,02,02,02,02,01,15  
20420 DATA 01,01,04,04,01,01,01,01,14  
20430 DATA 01,01,01,01,01,01,01,01,8  
20440 DATA 01,01,01,01,01,01,04,04,14  
20450 DATA 02,04,04,04,01,01,04,01,21  
20460 DATA 01,04,01,01,04,04,02,02,16  
20470 DATA 01,01,04,04,04,04,04,04,26  
20480 DATA 04,04,04,04,04,04,04,04,32  
20490 DATA 04,04,04,04,04,04,04,04,32  
20500 DATA 03,00,00,00,01,01,02,02,20  
20510 DATA 02,02,02,01,01,00,00,00,19  
20520 DATA 00,03,04,04,04,04,04,04,27  
20530 DATA 01,04,01,02,03,02,01,04,18  
20540 DATA 01,04,04,04,04,04,04,04,29  
20550 DATA 02,00,00,01,01,04,00,28  
20560 DATA 02,01,04,01,01,00,00,00,9  
20570 DATA 00,05,04,04,04,04,04,04,27  
20580 DATA 01,01,04,01,01,01,04,01,14  
20590 DATA 01,04,04,04,04,04,04,04,29  
20600 DATA 05,00,00,00,01,01,04,04,24  
20610 DATA 01,04,04,01,01,00,00,22  
20620 DATA 00,05,04,04,04,04,04,04,27  
20630 DATA 01,01,01,01,01,01,01,01,8  
20640 DATA 01,04,04,04,04,04,04,04,29  
20650 DATA 05,00,00,00,01,01,01,01,7  
20660 DATA 06,01,01,01,00,03,00,13  
20670 DATA 00,03,04,04,04,04,04,04,27  
20680 DATA 01,01,01,01,01,01,01,01,8  
20690 DATA 01,04,04,04,04,04,04,04,29  
20700 DATA 00,00,00,03,01,01,01,01,18  
20710 DATA 01,01,01,01,01,00,00,00,5  
20720 DATA 00,00,04,04,03,01,00,00,13  
20730 DATA 01,01,01,01,01,01,01,01,8  
20740 DATA 01,01,00,03,00,00,04,04,13  
20750 DATA 04,04,04,04,04,04,04,04,32  
20760 DATA 04,04,04,04,04,04,04,04,32  
20770 DATA 04,04,04,04,01,01,01,01,20  
20780 DATA 01,01,04,04,04,04,01,01,20  
20790 DATA 01,01,02,02,02,01,04,04,10  
20800 DATA 01,01,02,01,01,04,01,03,14  
20810 DATA 02,03,04,01,01,01,03,05,18  
20820 DATA 03,01,04,04,01,02,01,01,17  
20830 DATA 04,01,01,01,02,01,01,04,17  
20840 DATA 01,01,02,02,02,01,04,04,17  
20850 DATA 02,01,01,01,04,05,01,01,14  
20860 DATA 03,01,01,04,01,01,01,01,15  
20870 DATA 01,04,04,04,03,01,01,01,16  
20880 DATA 01,04,01,01,01,01,04,04,14  
20890 DATA 01,03,01,01,03,01,04,04,18  
20900 DATA 01,02,01,01,01,02,01,01,13  
20910 DATA 04,02,01,01,01,01,02,02,14  
20920 DATA 02,01,04,04,01,03,01,01,17  
20930 DATA 01,01,02,02,02,02,01,01,12  
20940 DATA 01,01,02,03,05,01,04,04,19  
20950 DATA 03,02,01,01,06,01,01,02,17  
20960 DATA 02,01,01,01,01,01,02,01,10  
20970 DATA 01,02,04,04,03,03,01,01,19  
20980 DATA 01,01,01,01,01,01,00,01,7  
20990 DATA 01,01,01,01,01,01,04,04,14  
21000 DATA 01,01,01,01,01,01,01,01,8  
21010 DATA 01,01,00,00,00,01,01,15  
21020 DATA 03,03,04,04,04,04,04,04,30  
21030 DATA 04,04,04,04,04,04,04,04,32  
21040 DATA 04,04,04,04,04,04,04,04,32

21050 DATA 01,01,01,01,06,01,01,01,15  
21060 DATA 01,01,01,01,01,01,01,01,8  
21070 DATA 01,01,04,04,04,04,04,04,26  
21080 DATA 04,04,04,04,04,04,04,01,26  
21090 DATA 01,01,01,01,01,01,04,04,14  
21100 DATA 01,01,01,01,01,01,01,01,8  
21110 DATA 01,01,04,01,01,01,01,01,11  
21120 DATA 01,01,04,04,00,04,04,04,19  
21130 DATA 04,04,01,04,04,01,04,01,23  
21140 DATA 01,01,01,01,01,01,04,04,14  
21150 DATA 00,04,01,01,02,01,01,01,22  
21160 DATA 04,04,04,01,01,01,01,01,14  
21170 DATA 01,01,04,04,00,04,04,30  
21180 DATA 04,01,04,01,04,04,01,19  
21190 DATA 01,01,01,01,01,01,04,04,14  
21200 DATA 03,04,01,04,00,04,01,17  
21210 DATA 04,00,04,01,01,01,01,13  
21220 DATA 01,01,04,04,03,04,03,04,24  
21230 DATA 00,00,04,00,04,00,04,01,35  
21240 DATA 01,01,01,01,01,01,04,04,14  
21250 DATA 05,04,03,04,00,00,00,00,29  
21260 DATA 04,00,04,01,01,01,01,01,13  
21270 DATA 01,01,04,04,00,00,00,04,40  
21280 DATA 03,00,04,00,04,03,04,01,30  
21290 DATA 01,01,01,01,01,01,04,04,14  
21300 DATA 04,04,04,04,04,04,04,04,32  
21310 DATA 04,04,04,04,04,04,04,04,32  
21320 DATA 04,04,04,04,02,04,01,01,24  
21330 DATA 01,01,01,01,01,01,02,02,10  
21340 DATA 01,01,01,01,01,01,04,04,14  
21350 DATA 03,01,01,01,01,01,06,01,15  
21360 DATA 01,01,01,01,01,01,01,01,8  
21370 DATA 01,01,04,04,01,04,04,04,23  
21380 DATA 04,04,00,04,04,04,04,04,26  
21390 DATA 02,04,01,01,01,04,04,18  
21400 DATA 01,04,00,00,00,00,00,00,5  
21410 DATA 00,00,00,01,01,04,01,01,8  
21420 DATA 01,01,04,01,04,00,04,04,19  
21430 DATA 04,04,04,00,04,04,04,04,20  
21440 DATA 00,04,04,01,04,04,04,04,28  
21450 DATA 05,04,01,04,00,00,00,00,23  
21460 DATA 00,00,04,00,04,00,00,19  
21470 DATA 00,00,04,01,04,00,04,17  
21480 DATA 05,04,04,04,04,03,04,30  
21490 DATA 00,04,00,01,01,00,04,04,14  
21500 DATA 01,01,00,04,03,04,00,00,13  
21510 DATA 00,00,03,04,00,00,01,12  
21520 DATA 01,00,04,04,04,00,04,21  
21530 DATA 04,04,04,00,04,04,04,04,28  
21540 DATA 00,04,00,00,00,04,04,23  
21550 DATA 03,03,00,00,00,00,00,00,6  
21560 DATA 00,00,00,00,00,00,04,23  
21570 DATA 04,03,04,04,04,04,04,04,31  
21580 DATA 04,04,04,04,04,04,04,04,32  
21590 DATA 04,04,04,04,04,04,04,04,32  
21600 DATA 01,01,01,01,01,01,01,02,9  
21610 DATA 02,02,02,02,01,01,01,01,12  
21620 DATA 01,01,04,04,01,01,01,01,14  
21630 DATA 01,01,01,01,01,01,01,01,8  
21640 DATA 01,01,01,01,01,01,04,04,14  
21650 DATA 01,01,01,01,06,01,01,01,15  
21660 DATA 01,01,01,01,01,01,01,01,8  
21670 DATA 01,01,04,04,04,04,04,04,26  
21680 DATA 04,04,04,01,01,01,01,01,17  
21690 DATA 04,04,04,01,01,01,04,04,25  
21700 DATA 04,00,00,00,00,00,00,00,12  
21710 DATA 00,00,00,00,00,00,04,01,5  
21720 DATA 01,01,04,04,04,04,04,04,26  
21730 DATA 04,04,04,04,04,04,04,04,28  
21740 DATA 04,04,04,01,01,01,04,04,23  
21750 DATA 01,01,01,01,04,00,00,00,04,1  
21760 DATA 00,00,04,01,01,01,01,01,31  
21770 DATA 01,01,04,04,01,01,01,01,14  
21780 DATA 04,00,00,00,01,00,04,00,9  
21790 DATA 00,00,00,00,01,04,04,9  
21800 DATA 01,01,01,01,04,00,01,01,01,8  
21810 DATA 00,00,04,00,01,01,01,01,8

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21820 DATA 00,01,04,04,01,01,01,13
21830 DATA 04,00,00,00,00,01,04,03,12
21840 DATA 00,00,00,00,00,01,04,04,20
21850 DATA 04,04,04,04,04,04,04,32
21860 DATA 04,04,04,04,04,04,04,32
21870 DATA 04,04,04,04,01,01,01,20
21880 DATA 01,01,01,01,01,01,01,01,8
21890 DATA 01,01,01,01,02,01,04,04,15
21900 DATA 01,03,01,04,01,03,01,15
21910 DATA 01,02,02,02,01,01,01,02,12
21920 DATA 03,02,04,04,01,01,03,04,22
21930 DATA 03,01,01,01,01,01,02,02,12
21940 DATA 02,03,01,02,01,04,04,18
21950 DATA 01,04,04,04,04,01,01,25
21960 DATA 01,01,03,02,02,02,01,13
21970 DATA 01,04,04,01,01,03,04,19
21980 DATA 03,01,01,01,02,01,03,02,14
21990 DATA 02,02,02,01,01,04,04,17
22000 DATA ***
```

```
22110 DATA 01,01,01,01,01,01,01,03,10
22120 DATA 03,03,04,04,04,04,04,30
22130 DATA 04,04,04,04,04,04,04,32
22140 DATA 04,04,04,04,04,04,04,32
22150 DATA 01,02,02,02,01,01,02,01,12
22160 DATA 02,02,02,01,01,01,01,06,16
22170 DATA 01,01,04,04,01,02,01,03,17
22180 DATA 01,01,02,01,02,01,01,01,10
22190 DATA 01,02,01,01,01,01,04,04,15
22200 DATA 01,02,03,03,01,02,02,01,15
22210 DATA 02,02,01,03,01,03,01,02,15
22220 DATA 02,01,04,04,01,02,01,01,16
22230 DATA 01,02,01,00,02,01,01,01,9
22240 DATA 01,02,03,01,01,01,04,04,17
22250 DATA 01,02,02,02,01,02,01,00,19
22260 DATA 02,00,00,00,00,01,01,16
22270 DATA 01,01,04,04,01,04,04,04,23
22280 DATA 01,04,04,06,01,02,02,02,20
22290 DATA 00,04,04,04,01,01,04,04,22
22300 DATA 01,01,01,04,01,04,03,04,19
22310 DATA 01,02,00,02,01,01,03,04,22
22320 DATA 01,01,04,04,01,03,04,04,22
22330 DATA 01,01,01,04,01,02,02,02,14
22340 DATA 01,04,04,01,01,04,04,23
22350 DATA 01,03,00,04,01,04,00,04,36
22360 DATA 01,02,03,02,01,01,03,04,17
22370 DATA 01,01,04,04,01,04,04,04,25
22380 DATA 01,04,04,04,01,02,02,02,20
22390 DATA 00,04,04,04,01,01,04,04,22
22400 DATA 04,04,04,04,04,04,04,32
22410 DATA 04,04,04,04,04,04,04,32
22420 DATA 04,04,04,02,03,03,02,26
22430 DATA 02,04,03,03,03,04,04,02,25
22440 DATA 02,02,01,02,03,01,04,04,19
22450 DATA 02,03,03,02,01,03,03,03,20
22460 DATA 03,03,02,01,01,01,01,02,14
22470 DATA 03,01,04,04,01,02,02,01,18
22480 DATA 01,01,02,03,02,02,01,01,13
22490 DATA 06,01,01,02,03,01,04,04,22
22500 DATA 01,01,04,01,01,01,01,02,12
22510 DATA 02,01,01,01,01,01,01,02,10
22520 DATA 01,01,04,04,01,01,01,16
22530 DATA 01,01,01,01,01,01,01,01,8
22540 DATA 01,01,01,01,01,01,04,04,14
22550 DATA 00,00,00,00,00,00,00,00,0
22560 DATA 00,01,01,04,04,04,04,04,22
22570 DATA 04,04,04,04,01,01,01,20
22580 DATA 01,01,01,01,00,01,04,20
22590 DATA 00,00,00,00,03,03,04,04,58
22600 DATA 02,00,02,00,01,00,00,01,6
22610 DATA 01,00,01,04,03,03,03,18
22620 DATA 03,03,04,01,00,01,00,24
22630 DATA 01,00,00,03,01,01,01,04,7
22640 DATA 03,03,03,03,03,04,04,26
22650 DATA 02,00,01,00,01,00,00,03,26
22660 DATA 01,00,01,04,03,03,00,03,26
22670 DATA 03,03,04,04,04,04,04,30
22680 DATA 04,04,04,04,04,04,04,32
22690 DATA 04,04,04,04,04,04,04,32
22700 DATA 03,01,01,01,01,01,00,00,8
22710 DATA 00,00,00,00,00,00,00,00,0
22720 DATA 00,00,04,04,01,00,00,00,42
22730 DATA 01,00,00,00,04,04,04,00,12
22740 DATA 06,00,00,00,00,00,04,04,14
22750 DATA 01,00,01,01,01,04,00,00,19
22760 DATA 00,04,00,00,00,00,00,04,4
22770 DATA 00,00,04,01,01,00,00,00,42
22780 DATA 01,04,00,00,00,04,00,04,13
22790 DATA 04,00,00,00,00,04,04,12
22800 DATA 01,01,01,00,01,04,03,03,25
22810 DATA 02,04,00,04,03,02,03,04,22
22820 DATA 00,00,04,04,01,00,00,00,43
22830 DATA 03,04,04,02,00,00,04,21
22840 DATA 03,04,03,04,00,00,04,04,33
22850 DATA 01,01,01,03,01,03,01,02,13
22860 DATA 01,02,00,04,04,04,04,23
```

```
22870 DATA 00,00,04,04,00,00,01,03,12
22880 DATA 03,03,01,02,02,02,00,00,24
22890 DATA 00,04,00,04,00,00,04,04,27
22900 DATA 00,00,01,03,01,01,01,02,9
22910 DATA 01,02,01,00,04,00,04,12
22920 DATA 00,00,04,04,00,00,00,03,11
22930 DATA 00,00,00,02,01,02,03,00,8
22940 DATA 00,00,00,00,00,04,04,36
22950 DATA 04,04,04,04,04,04,04,32
22960 DATA 04,04,04,04,04,04,04,32
22970 DATA 04,04,04,04,02,00,03,02,34
22980 DATA 01,01,01,01,00,01,01,01,18
22990 DATA 01,01,02,01,01,01,04,04,15
23000 DATA 03,02,02,01,01,01,01,01,12
23010 DATA 01,01,01,01,02,01,01,9
23020 DATA 03,02,04,04,02,01,01,01,18
23030 DATA 01,01,01,04,00,04,04,04,19
23040 DATA 04,04,04,04,01,01,04,00,26
23050 DATA 02,01,01,04,04,04,00,00,20
23060 DATA 00,00,00,00,00,00,00,04,4
23070 DATA 02,00,04,04,01,01,04,00,18
23080 DATA 00,00,00,00,00,04,00,04,8
23090 DATA 00,00,00,04,01,01,04,04,25
23100 DATA 03,04,00,00,04,04,04,04,23
23110 DATA 04,04,00,04,00,04,04,04,24
23120 DATA 02,01,04,04,04,00,00,00,19
23130 DATA 00,00,00,00,00,00,00,04,4
23140 DATA 00,00,03,04,01,01,04,00,17
23150 DATA 04,00,04,00,00,04,04,04,20
23160 DATA 04,04,04,04,04,04,01,01,29
23170 DATA 01,01,04,04,00,04,00,04,14
23180 DATA 00,04,01,01,03,03,00,02,14
23190 DATA 01,00,00,00,01,01,04,04,11
23200 DATA 03,03,04,00,00,04,01,01,30
23210 DATA 03,02,00,01,01,01,01,06,26
23220 DATA 01,01,04,04,04,04,04,04,26
23230 DATA 04,04,04,04,04,04,04,32
23240 DATA 04,04,04,04,04,04,04,32
23250 DATA 04,00,00,00,00,00,00,00,4
23260 DATA 00,06,00,00,00,00,00,04,4
23270 DATA 00,00,04,04,04,00,04,00,18
23280 DATA 04,04,04,04,00,04,04,04,20
23290 DATA 04,00,00,04,03,03,04,04,22
23300 DATA 04,00,04,00,00,00,00,00,19
23310 DATA 00,00,00,00,00,04,00,04,8
23320 DATA 01,01,04,04,04,04,04,04,18
23330 DATA 04,04,00,00,04,04,04,04,24
23340 DATA 04,04,00,04,01,01,04,04,22
23350 DATA 04,00,00,04,04,04,00,20
23360 DATA 00,04,00,04,04,00,00,04,16
23370 DATA 02,01,04,04,03,04,00,00,18
23380 DATA 04,00,00,00,00,00,00,00,15
23390 DATA 04,00,04,01,01,01,04,04,19
23400 DATA 01,00,00,00,04,04,04,04,17
23410 DATA 00,04,04,04,04,04,02,02,22
23420 DATA 01,02,04,04,00,00,04,15
23430 DATA 00,00,00,00,00,00,00,04,25
23440 DATA 00,00,04,02,01,02,04,04,44
23450 DATA 00,00,00,00,06,04,04,04,48
23460 DATA 00,00,04,04,04,04,02,22
23470 DATA 01,02,04,04,03,03,00,00,59
23480 DATA 04,03,00,00,00,00,00,00,7
23490 DATA 00,00,01,01,01,01,04,04,12
23500 DATA 04,04,04,04,04,04,04,04,32
23510 DATA 04,04,04,04,04,04,04,04,32
23520 DATA 04,04,00,00,00,00,00,00,8
23530 DATA 00,00,00,00,00,00,00,00,0
24050 DATA ***
```

## Program 7

```
6 PRINT "program 7 is running":PRINT "work
ing on line"
10 valid$="0123456789ABCDEF":Ln=22000
20 x=37540
30 FOR y=0 TO 7
40 READ num$:IF num$="" THEN 110
50 IF INSTR(valid$,LEFT$(num$,1)) < 1 THEN
TR (valid$,RIGHT$(num$,1)) THEN num$=
AL("E"+num$):POKE x+y,num ELSE 120
60 chk=chk+num
70 NEXT:Ln=Ln+10
80 READ check:IF chk<check THEN 130
90 chk=0
95 PRINT ln:CHR$(13)
100 x=x+8:GOTO 30
110 PRINT "bytes":yxy
115 STOP:CALL 60019:CALL 21760
120 PRINT "Invalid character in line ":ln
:END
130 PRINT "Checksum error in line ":ln:EN
D
22000 DATA 01,03,01,04,01,03,01,02,16
22010 DATA 03,01,03,02,03,02,01,01,16
22020 DATA 01,01,04,04,01,01,01,14
22030 DATA 01,01,01,01,02,01,02,02,11
22040 DATA 02,03,01,06,01,02,04,04,23
22050 DATA 01,01,01,01,01,01,01,8
22060 DATA 01,02,02,02,03,01,01,01,13
22070 DATA 02,03,04,04,01,02,02,02,20
22080 DATA 01,01,01,01,01,01,01,8
22090 DATA 01,01,01,02,03,03,04,04,19
22100 DATA 02,03,03,03,02,02,01,19
```