

```
10 MODE 0
20 DIM B(9)
30 FOR I=1 TO 9:LET B(I)=0:NEXT I
40 LET A=0:LET DR=0
50 INK 0,20:INK 1,6:INK 2,2:INK 3,0:INK 4,24:INK 5
,12:INK 6,4:INK 7,20,6:INK 8,20,2
60 WINDOW #1,7,14,6,17:PAPER #1,0
70 WINDOW #2,2,5,6,24:PAPER #2,0
80 WINDOW #3,16,19,6,24:PAPER #3,0
90 WINDOW #4,7,14,20,23:PAPER #4,0:PEN #4,7
100 GOSUB 2570
110 GOSUB 2800
120 BORDER 4:PAPER 4:CLS:CLS #1:CLS #2:CLS #3:CLS
#4
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130 GOSUB 2510
140 GOSUB 2720
150 GOSUB 1190
160 FOR Y=301 TO 93 STEP -52
170 LET X=64:GOSUB 1410
180 LET X=514:GOSUB 1310
190 NEXT Y
200 IF F$="N" THEN GOTO 490
210 GOSUB 2270
220 X=64:Y=93:GOSUB 2440
230 IF S<>5 THEN LET S=5:GOTO 250
240 LET S=1+2*INT(5*RND(1)):IF S=5 THEN GOTO 240
250 FOR JJ=1 TO 500:NEXT JJ
260 GOSUB 2410:GOSUB 1510:GOSUB 1310:LET X=514:LET
  Y=93:GOSUB 2440:LET B(S)=2
270 FOR A=1 TO 3
280 GOSUB 2270
290 LET X=64:LET Y=93+52*A:GOSUB 2440
300 GOSUB 1550:IF T=1 THEN GOTO 2130
310 LET K=2:GOSUB 1690
320 IF S<>0 THEN GOSUB 2410:LET B(S)=2:GOSUB 1510:
GOSUB 1310:GOTO 400
330 LET K=1:GOSUB 1690
340 IF S<>0 THEN GOSUB 2410:LET B(S)=2:GOSUB 1510:
GOSUB 1310:GOTO 400
350 LET S=1+INT(9*RND(1))
360 IF B(S)=0 THEN GOTO 390
370 GOTO 350
380 GOSUB 2410
390 LET B(S)=2:GOSUB 1510:GOSUB 1310
400 LET X=514:LET Y=93+52*A:GOSUB 2440
410 GOSUB 1550
420 IF T=1 THEN GOTO 2130
430 NEXT A
440 GOSUB 2270:GOSUB 1510:GOSUB 1410
450 LET X=64:LET Y=301:GOSUB 2440
460 GOSUB 1550
470 IF T=0 THEN LET DR=1
480 GOTO 2130
490 REM ** COMPUTER FIRST **
500 LET S=1+INT(9*RND(1)):IF S/2=INT(S/2) THEN GOT
  O 500
510 LET B(S)=2
520 GOSUB 1510:GOSUB 1310:LET X=514:LET Y=93:GOSUB
  2440
530 IF S<>5 THEN GOTO 1030
540 GOSUB 2270
550 LET X=64:LET Y=93:GOSUB 2440
560 IF S/2<>INT(S/2) THEN GOTO 710
570 IF S=2 OR S=4 THEN LET S=9
580 IF S=6 OR S=8 THEN LET S=1
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590 LET B(S)=2
600 GOSUB 1510:GOSUB 1310:LET X=514:LET Y=145:GOSU
B 2440
610 GOSUB 2270
620 LET X=64:LET Y=145:GOSUB 2440
630 LET K=2:GOSUB 1690:IF S<>0 THEN GOTO 650
640 LET K=1:GOSUB 1690:IF S<>0 THEN GOTO 650
650 GOSUB 1510:GOSUB 1310:LET B(S)=2:LET X=514:LET
Y=197:GOSUB 2440
660 GOSUB 1550:IF T=1 THEN GOTO 2130
670 GOSUB 2270:LET X=64:LET Y=197:GOSUB 2440
680 LET K=2:GOSUB 1690:LET B(S)=2:GOSUB 1510:GOSUB
1310
690 LET X=514:LET Y=249:GOSUB 2440
700 GOSUB 2130
710 LET S=10-S:LET S1=S:LET B(S)=2:GOSUB 1510:GOSU
B 1310
720 LET X=514:LET Y=145:GOSUB 2440
730 GOSUB 2270
740 LET X=64:LET Y=145:GOSUB 2440
750 LET K=1:GOSUB 1690:IF S<>0 THEN GOTO 930
760 IF S1<>9 THEN GOTO 790
770 IF B(6)=1 THEN LET S=8
780 IF B(8)=1 THEN LET S=6
790 IF S1<>7 THEN GOTO 820
800 IF B(4)=1 THEN LET S=8
810 IF B(8)=1 THEN LET S=4
820 IF S1<>3 THEN GOTO 850
830 IF B(2)=1 THEN LET S=6
840 IF B(6)=1 THEN LET S=2
850 IF S1<>1 THEN GOTO 880
860 IF B(2)=1 THEN LET S=4
870 IF B(4)=1 THEN LET S=2
880 LET B(S)=2:GOSUB 1510:GOSUB 1310:LET X=514:LET
Y=197:GOSUB 2440
890 GOSUB 2270:LET X=64:LET Y=197:GOSUB 2440
900 LET K=2:GOSUB 1690:LET B(S)=2:GOSUB 1510:GOSUB
1310
910 LET X=514:LET Y=249:GOSUB 2440
920 GOSUB 1550:GOSUB 2130
930 LET K=1:GOSUB 1690:LET B(S)=2:GOSUB 1510:GOSUB
1310:LET X=514:LET Y=197:GOSUB 2440
940 GOSUB 2270:LET X=64:LET Y=197:GOSUB 2440
950 LET K=2:GOSUB 1690:IF S<>0 THEN GOTO 980
960 LET K=1:GOSUB 1690:IF S<>0 THEN GOTO 980
970 LET S=1+INT(9*RND(1)):IF B(S)<>0 THEN GOTO 970
980 LET B(S)=2:GOSUB 1510:GOSUB 1310:LET X=514:LET
Y=249:GOSUB 2440:GOSUB 1550:IF T=1 THEN GOTO 2130
990 GOSUB 2270:LET X=64:LET Y=249:GOSUB 2440
1000 FOR A=1 TO 9:IF B(A)=0 THEN LET S=A
1010 NEXT A
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1020 LET B(S)=2:GOSUB 1510:GOSUB 1310:LET X=514:LE
T Y=301:GOSUB 2440:LET DR=1:GOTO 2130
1030 LET S1=S:GOSUB 2270:LET X=64:LET Y=93:GOSUB 2
440
1040 IF S<>5 THEN LET S=5:GOTO 1060
1050 LET S=10-S1
1060 LET B(S)=2:GOSUB 1510:GOSUB 1310:LET X=514:LE
T Y=145:GOSUB 2440
1070 FOR B=1 TO 3
1080 GOSUB 2270:LET X=64:LET Y=93+52*B:GOSUB 2440
1090 LET K=2:GOSUB 1690:IF S<>0 THEN GOTO 1130
1100 LET K=1:GOSUB 1690:IF S<>0 THEN GOTO 1130
1110 IF B=1 AND B(5)=2 THEN GOTO 760
1120 LET S=1+INT(9*RND(1)):IF B(S)<>0 THEN GOTO 11
20
1130 LET B(S)=2:GOSUB 1510:GOSUB 1310:LET X=514:LE
T Y=145+52*B:GOSUB 2440
1140 GOSUB 1550:IF T=1 THEN GOTO 2130
1150 NEXT B
1160 LET DR=1:GOTO 2130
1170 IF INKEY$="" THEN GOTO 1170
1180 END
1190 REM ** DRAW BOARD **
1200 PLOT 0,0,5:FOR I=1 TO 9
1210 IF I<4 THEN MOVE 204+68*(I-1),285:TAG:PRINT I
;:GOTO 1240
1220 IF I>6 THEN MOVE 204+68*(I-7),181:TAG:PRINT I
;:GOTO 1240
1230 MOVE 204+68*(I-4),233:TAG:PRINT I;
1240 NEXT I
1250 PLOT 286,300,3:DRAW 286,150:DRAW 287,150:DRAW
287,300
1260 PLOT 354,300,3:DRAW 354,150:DRAW 355,150:DRAW
355,300
1270 PLOT 220,252,3:DRAW 420,252:DRAW 420,250:DRAW
220,250
1280 PLOT 220,200,3:DRAW 420,200:DRAW 420,199:DRAW
220,199
1290 PLOT 0,0,4
1300 RETURN
1310 REM ** DRAW CROSS **
1320 PLOT 0,0,1
1330 MOVE X,Y:TAG
1340 PRINT CHR$(200);CHR$(201);
1350 MOVE X,Y-16
1360 PRINT CHR$(202);CHR$(203);
1370 MOVE X,Y-32
1380 PRINT CHR$(204);CHR$(205);
1390 TAGOFF
1400 RETURN
1410 REM ** DRAW NOUGHT **
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1420 PLOT 0,0,2
1430 MOVE X,Y:TAG
1440 PRINT CHR$(206);CHR$(207);
1450 MOVE X,Y-16
1460 PRINT CHR$(208);CHR$(209);
1470 MOVE X,Y-32
1480 PRINT CHR$(210);CHR$(211);
1490 TAGOFF
1500 RETURN
1510 REM ** POSITION OF SYMBOL **
1520 LET X=152+68*(S-3*INT((S-1)/3))
1530 LET Y=301-52*INT((S-1)/3)
1540 RETURN
1550 REM ** RESULT ? **
1560 LET DR=0:LET T=0
1570 FOR J=1 TO 2
1580 IF B(1)=J AND B(2)=J AND B(3)=J THEN GOTO 168
0
1590 IF B(1)=J AND B(5)=J AND B(9)=J THEN GOTO 168
0
1600 IF B(1)=J AND B(4)=J AND B(7)=J THEN GOTO 168
0
1610 IF B(2)=J AND B(5)=J AND B(8)=J THEN GOTO 168
0
1620 IF B(3)=J AND B(6)=J AND B(9)=J THEN GOTO 168
0
1630 IF B(3)=J AND B(5)=J AND B(7)=J THEN GOTO 168
0
1640 IF B(4)=J AND B(5)=J AND B(6)=J THEN GOTO 168
0
1650 IF B(7)=J AND B(8)=J AND B(9)=J THEN GOTO 168
0
1660 NEXT J
1670 RETURN
1680 LET T=1:RETURN
1690 REM ** SELECT MOVE **
1700 LET S=0:IF B(1)=1 AND B(9)=1 AND B(5)=2 AND A
=1 THEN LET S=2:GOTO 2120
1710 IF B(3)=1 AND B(7)=1 AND B(5)=2 AND A=1 THEN
LET S=8:GOTO 2120
1720 IF B(1)=1 AND B(6)=1 AND B(5)=2 AND A=1 THEN
LET S=9:GOTO 2120
1730 IF B(1)=1 AND B(8)=1 AND B(5)=2 AND A=1 THEN
LET S=9:GOTO 2120
1740 IF B(1)=K AND B(2)=K AND B(3)=0 THEN LET S=3:
GOTO 2120
1750 IF B(2)=1 AND B(4)=1 AND B(5)=2 AND A=1 THEN
LET S=1:GOTO 2120
1760 IF B(2)=1 AND B(6)=1 AND B(5)=2 AND A=1 THEN
LET S=3:GOTO 2120
1770 IF B(8)=1 AND B(6)=1 AND B(5)=2 AND A=1 THEN
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LET S=9:GOTO 2120
1780 IF B(8)=1 AND B(4)=1 AND B(5)=2 AND A=1 THEN
LET S=7:GOTO 2120
1790 IF B(1)=K AND B(3)=K AND B(2)=0 THEN LET S=2:
GOTO 2120
1800 IF B(1)=K AND B(4)=K AND B(7)=0 THEN LET S=7:
GOTO 2120
1810 IF A=1 AND B(5)=1 AND B(9)=1 AND B(1)=2 AND B
(7)=0 THEN LET S=7:GOTO 2120
1820 IF A=1 AND B(5)=1 AND B(7)=1 AND B(3)=2 AND B
(9)=0 THEN LET S=9:GOTO 2120
1830 IF A=1 AND B(5)=1 AND B(3)=1 AND B(7)=2 AND B
(1)=0 THEN LET S=1:GOTO 2120
1840 IF A=1 AND B(5)=1 AND B(1)=1 AND B(9)=2 AND B
(3)=0 THEN LET S=3:GOTO 2120
1850 IF B(1)=K AND B(5)=K AND B(9)=0 THEN LET S=9:
GOTO 2120
1860 IF B(1)=K AND B(7)=K AND B(4)=0 THEN LET S=4:
GOTO 2120
1870 IF B(1)=K AND B(9)=K AND B(5)=0 THEN LET S=5:
GOTO 2120
1880 IF B(3)=1 AND B(4)=1 AND B(5)=2 AND A=1 THEN
LET S=7:GOTO 2120
1890 IF B(3)=1 AND B(8)=1 AND B(5)=2 AND A=1 THEN
LET S=7:GOTO 2120
1900 IF B(2)=K AND B(3)=K AND B(1)=0 THEN LET S=1:
GOTO 2120
1910 IF B(2)=K AND B(5)=K AND B(8)=0 THEN LET S=8:
GOTO 2120
1920 IF B(7)=1 AND B(2)=1 AND B(5)=2 AND A=1 THEN
LET S=3:GOTO 2120
1930 IF B(7)=1 AND B(6)=1 AND B(5)=2 AND A=1 THEN
LET S=3:GOTO 2120
1940 IF B(2)=K AND B(8)=K AND B(5)=0 THEN LET S=5:
GOTO 2120
1950 IF B(3)=K AND B(5)=K AND B(7)=0 THEN LET S=7:
GOTO 2120
1960 IF B(9)=1 AND B(2)=1 AND B(5)=2 AND A=1 THEN
LET S=1:GOTO 2120
1970 IF B(9)=1 AND B(4)=1 AND B(5)=2 AND A=1 THEN
LET S=1:GOTO 2120
1980 IF B(3)=K AND B(6)=K AND B(9)=0 THEN LET S=9:
GOTO 2120
1990 IF B(3)=K AND B(7)=K AND B(5)=0 THEN LET S=5:
GOTO 2120
2000 IF B(3)=K AND B(9)=K AND B(6)=0 THEN LET S=6:
GOTO 2120
2010 IF B(4)=K AND B(5)=K AND B(6)=0 THEN LET S=6:
GOTO 2120
2020 IF B(4)=K AND B(6)=K AND B(5)=0 THEN LET S=5:
GOTO 2120
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2030 IF B(4)=K AND B(7)=K AND B(1)=0 THEN LET S=1:
GOTO 2120
2040 IF B(6)=K AND B(5)=K AND B(4)=0 THEN LET S=4:
GOTO 2120
2050 IF B(6)=K AND B(9)=K AND B(3)=0 THEN LET S=3:
GOTO 2120
2060 IF B(7)=K AND B(5)=K AND B(3)=0 THEN LET S=3:
GOTO 2120
2070 IF B(7)=K AND B(8)=K AND B(9)=0 THEN LET S=9:
GOTO 2120
2080 IF B(7)=K AND B(9)=K AND B(8)=0 THEN LET S=8:
GOTO 2120
2090 IF B(8)=K AND B(9)=K AND B(7)=0 THEN LET S=7:
GOTO 2120
2100 IF B(8)=K AND B(5)=K AND B(2)=0 THEN LET S=2:
GOTO 2120
2110 IF B(9)=K AND B(5)=K AND B(1)=0 THEN LET S=1:
GOTO 2120
2120 RETURN
2130 REM ** GAME OVER **
2140 PEN #4,3
2150 CLS #4:PRINT #4
2160 IF DR=1 THEN PRINT #4," MATCH DRAWN":GOTO
2190
2170 IF J=1 THEN PRINT #4," PLAYER WINS":GOTO 21
90
2180 PRINT #4,"COMPUTER WINS"
2190 FOR JJ=1 TO 3000:NEXT JJ
2200 CLS #4:PRINT #4
2210 PRINT #4," PLAY AGAIN?"
2220 LET PA$=INKEY$:IF PA$="" THEN GOTO 2220
2230 IF PA$="N" THEN CLS:END
2240 FOR I=1 TO 9:LET B(I)=0:NEXT I
2250 GOSUB 2800
2260 GOTO 120
2270 REM ** MESSAGE **
2280 CLS #4
2290 PRINT #4
2300 PEN #4,8:PRINT #4,"PLAYER'S TURN"
2310 LET S$=INKEY$:IF S$="" THEN GOTO 2310
2320 IF ASC(S$)<49 OR ASC(S$)>57 THEN GOTO 2310
2330 IF B(VAL(S$))<>0 THEN GOTO 2310
2340 LET S=VAL(S$)
2350 LET B(S)=1:GOSUB 1510:GOSUB 1410
2360 CLS #4
2370 PRINT #4
2380 PEN #4,7:PRINT #4,"COMPUTER TO MOVE"
2390 FOR JJ=1 TO 1000:NEXT JJ
2400 RETURN
2410 IF RND(1)<L THEN RETURN
2420 LET S=1+INT(9*RND(1)):IF B(S)<>0 THEN GOTO 24

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20
2430 RETURN
2440 REM ** ERASE **
2450 TAG
2460 MOVE X,Y:PRINT " ";
2470 MOVE X,Y-16:PRINT " ";
2480 MOVE X,Y-32:PRINT " ";
2490 TAGOFF
2500 RETURN
2510 REM ** BORDERS **
2520 PLOT 30,320,3:DRAW 30,14:DRAW 162,14:DRAW 162
,320:DRAW 30,320
2530 PLOT 478,320,3:DRAW 478,14:DRAW 610,14:DRAW 6
10,320:DRAW 478,320
2540 PLOT 190,320,3:DRAW 450,320:DRAW 450,126:DRAW
190,126:DRAW 190,320
2550 PLOT 190,96,3:DRAW 190,30:DRAW 450,30:DRAW 45
0,96:DRAW 190,96
2560 RETURN
2570 REM ** DEFINE CHARS **
2580 SYMBOL AFTER 200
2590 SYMBOL 200,&0,&0,&0,&0,&20,&30,&38,&3C
2600 SYMBOL 201,&0,&0,&0,&0,&4,&C,&1C,&3C
2610 SYMBOL 202,&1E,&F,&7,&3,&3,&7,&F,&1E
2620 SYMBOL 203,&78,&F0,&E0,&C0,&CO,&EO,&FO,&78
2630 SYMBOL 204,&3C,&38,&30,&20,&0,&0,&0,&0
2640 SYMBOL 205,&3C,&1C,&C,&4,&0,&0,&0,&0
2650 SYMBOL 206,&0,&0,&0,&0,&3F,&3F,&3F,&38
2660 SYMBOL 207,&0,&0,&0,&0,&FC,&FC,&FC,&1C
2670 SYMBOL 208,&38,&38,&38,&38,&38,&38,&38,&38
2680 SYMBOL 209,&1C,&1C,&1C,&1C,&1C,&1C,&1C,&1C
2690 SYMBOL 210,&38,&3F,&3F,&3F,&0,&0,&0,&0
2700 SYMBOL 211,&1C,&FC,&FC,&FC,&0,&0,&0,&0
2710 RETURN
2720 REM ** HEADING **
2730 MOVE 16,380:TAG:PRINT" ";
2740 MOVE 16,360:TAG:PRINT" ";
2750 PLOT 0,0,6
2760 MOVE 16,370:TAG:PRINT" NOUGHTS & CROSSES ";
2770 TAGOFF
2780 PLOT 16,382,3:DRAW 16,344:DRAW 626,344:DRAW 6
26,382:DRAW 16,382
2790 RETURN
2800 REM ** INSTRUCTIONS **
2810 BORDER 4:PAPER 4:PEN 1:CLS
2820 FOR J=1 TO 5:PRINT:NEXT J
2830 GOSUB 2720
2840 PRINT " DO YOU WANT THE":PRINT " FIRST MOV
E (Y/N) "
2850 LET F$=INKEY$:IF F$="" THEN GOTO 2850
2860 IF F$<>"Y" AND F$<>"N" THEN GOTO 2850

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2870 IF F$="N" THEN PRINT:PRINT:PRINT:GOTO 2930
2880 PRINT:PRINT" ENTER LEVEL 1-5 ";
2890 LET L$=INKEY$:IF L$<"1" OR L$>"5" THEN GOTO 2
890
2900 PEN 3:PRINT L$:PEN 1
2910 LET L=0.5+VAL(L$)/10
2920 PRINT
2930 PRINT:PRINT" YOU ARE PLAYING":PRINT:PRINT:P
RINT:PRINT
2940 LET X=288:LET Y=194:GOSUB 1410
2950 PRINT:PRINT" THE COMPUTER IS"
2960 LET Y=100:GOSUB 1310
2970 FOR J=1 TO 3000:NEXT J
2980 RETURN
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