

Bulls and Cows

Choosing a four digit number, the computer will respond to your guesses (or deductions, we hope) by displaying a bull when you get a correct digit in the right place, and a cow when a digit you input also occurs in the computer's number, but not in the same place. You should note that the computer's number can have the same digit repeated.

You can choose the number of guesses you're allowed, making it more difficult for yourself as you get more practiced.

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1  REM**BULLS AND COWS** **BBC VERSION**
by I.THOMAS from Spectrum program by R.Erskin
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10 VDU23,255,0,96,254,62,62,34,34,34
20 GOSUB580
30 DIMA(4),H(4)
40 CLS
50 R=RND(1):INPUTTAB(0,19)"How many guesses
s do you want (1-20) ?"T
60 IFT<1 OR T>20 GOTO50
70 GOSUB320
80 CLS:PRINTTAB(0,19)CHR$&86"I have chosen
my number":TIME=0:REPEAT:UNTILTIME>100
90 GOSUB370
100 FORQ=1TOT
110 PRINTTAB(0,25)"Enter guess ";Q;:INPUT
G
120 PRINTTAB(13,25)"          "
130 IFG<1000 OR G>9999 GOTO110
140 GOSUB190:GOSUB450
150 IFBL<4 NEXTQ
160 TIME=0:REPEAT:UNTILTIME>100:GOSUB530
170 COLOUR10:PRINT'"  Press Space for      a
nother go"
180 GOSUB650:MODE7:CLEAR:GOTO30
190 BL=0:WH=0
200 G$=STR$(G)
210 FORX=1TO4
220 A(X)=VAL(MID$(G$,X,1)):H(X)=0

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230     NEXT:FORX=1TO4
240     IFA(X)=N(X)  BL=BL+1:H(X)=1
250     NEXT:FORX=1TO4
260     FORY=1TO4
270         IFH(Y)GOTO290
280         IFA(X)=N(Y)  WH=WH+1:H(Y)=1:Y=4
290     NEXTY
300 NEXTX
310 RETURN
320 DIMN(4)
330 FORX=1TO4
340     N(X)=RND(9)
350 NEXTX
360 RETURN
370 MODE2
380 GCOL107,0:MOVE0,255:MOVE1279,255
390 PLOT85,0,957:DRAW1279,255
400 PLOT85,1279,957
410 COLOUR2:PRINTTAB(4,30)"ANSWER: ";:COLOUR
R129:COLOUR9:VDU19,9,1;0;0:FORX=1TO4:PRINT;N(
X);:NEXT
420 COLOUR128:COLOUR7
430 VDU5:GCOL0,0:FORX=1TOT:MOVE31,957-X*32:
PRINT;X:NEXT:VDU4
440 RETURN
450 VDU5:GCOL0,4:MOVE191,957-Q*32:PRINT;G
460 GCOL0,7:MOVE640,957-Q*32
470 IFWH=0 GOTO490
480 FORX=1TOWH:VDU255,32:NEXT
490 IFBL=0 GOTO520
500 GCOL0,0
510 FORX=1TOBL:VDU255,32:NEXT
520 VDU4:RETURN
530 VDU19,9,7;0;:IFBL<4 GOTO560
540 COLOUR3:PRINTTAB(0,25)"You are correct"
550 RETURN
560 COLOUR1:PRINTTAB(0,25)"You are wrong"
570 RETURN
580 MODE7:PRINT''CHR$141;CHR$&81;CHR$157;CH
R$&83"          BULLS AND COWS          "CHR$
156'CHR$141;CHR$&81;CHR$157;CHR$&83"
BULLS AND COWS          "CHR$156
590 PRINT'''CHR$&85"          In Bulls and Cow
s the computer"CHR$&85" chooses a four dig
it number which"

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170 *Bulls and Cows*

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600 PRINTCHR$&85" you have to guess."'"CHR$&85"
Each time you enter a four digit"'CHR$&85" guess,the computer will give you"
610 PRINTCHR$&85" clues: each Bull indicate
s a correct"'CHR$&85" digit in the correct
position and"
620 PRINTCHR$&85" each Cow indicates a cor
rect digit"'CHR$&85" in the wrong position."
630 PRINTCHR$&85" Bulls are black, Cows
are white"
640 PRINTTAB(0,21)CHR$136;CHR$&83" P
ress Space to start"
650 REPEATUNTILGET=32:RETURN
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