STATSPAINTER

What is the mode of
1,2,2,2,3,3,0
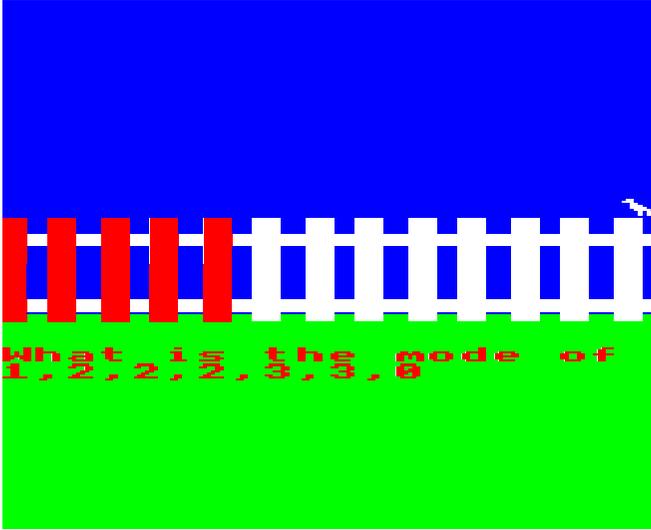
YOU are the director of Rockets Unlimited, and yesterday you were very pleased in the way the company was going. Then these officious accountants came, studied the figures and reckoned you were making a loss.

All weekend the sales figures are preying on your mind. Even while you are painting the fence you are trying to find out where the accountants went wrong. Sometimes you get so lost in thought that you end up painting the bird on the fence. If you do, it chirps in disapproval. If you can work accurately and quickly, you will find out where the accountants went wrong, and you will be able to prove to them that Rockets Unlimited is the success you always knew it was.

How to play

The questions are on the modes and medians of a given set of numbers. The mode of a set of numbers is the number occurring most frequently. The median of a set of numbers is the middle number. The numbers are arranged in ascending order. Just key in the answer without pressing RETURN.

If you're right you may move on to the next question by pressing RETURN. If you are wrong, or take too long to answer, the bird ends up by getting painted. After nine consecutive correct answers you find out where the accountants went wrong.

Programming hints

You can make the program easier by allowing more time to answer each question. To do this increase the 30 in line 370.

If you wish to use the graphics but to set different types of questions, replace procedures PROC_STAT, PROC_MODE and PROC_MEDIAN. Assign the question to Q$, the answer to A$ and the hint to H$. Questions in this program must have answers one digit or letter long. This could be changed though by changing the input routine at line 370.

```
  10  REM  STATS  PAINTER
  20  REM  COPYRIGHT  (C)  G.LUDINSKI  1983
  30  MODE5:VDU23;8202;0;0;0;
  40  DIM  D(15),C(5)
  50  CLS
  60  VDU  19,0,4,0,0,0,19,2,2,0,0,0
  70  GOTO  200
  80  REM
  90  REM  U.D.G.  CALCULATOR
 100  REM
 110  DEF  FNB(N$)
 120  TF=0
 130  FOR  L=0  TO  7
 140  TF=TF+(2^L)*VAL(MID$(N$,8-L,1))
 150  NEXT  L
 160  =TF
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```
 170 REM
 180 REM BIRD SHAPE
 190 REM
 200 VDU 23,224,FNB("01100000"),FNB("11
100000"),FNB("00110000"),FNB("00111000")
,FNB("00111100"),FNB("00011110"),FNB("00
001011"),FNB("00001011")
 210 REM
 220 REM DRAW FENCE
 230 REM
 240 FORJ=1 TO 9
 250 COLOUR128:CLS
 260 GCOL 0,2:PROC_BLOCK(0,0,1280,450)
 270 GCOL 0,3
 280 FOR I=0 TO 1240 STEP 100
 290 PROC_BLOCK(I,400,50,200)
 300 NEXT I
 310 PROC_BLOCK(0,420,1280,20):PROC_BLO
CK(0,550,1280,20)
 320 COLOUR3:COLOUR128:PRINTTAB(19,12);
CHR$(224)
 330 COLOUR3:COLOUR130
 340 PROC_STAT
 350 PRINTTAB(0,21);Q$
 360 GCOL0,1:I=-100:I$="":ID=0
 370 I$=INKEY$(30):IF I$="" OR ID=1 THE
N I=I+100:PROC_BLOCK(I,400,50,200):IF I<
1140 THEN GOTO 370
 380 IF I$=A$ AND ID=0 THEN PRINT''"Yes
, you're right":GOTO420
 390 IF I<1000 THEN PRINT I$;:ID=1:GOTO
370
 400 COLOUR1:COLOUR128:PRINTTAB(19,12);
CHR$(128):FORII=1TO3:SOUND1,-15,250,4:SO
UND1,0,0,1:SOUND1,-15,250,4:SOUND1,0,0,2
:NEXT:COLOUR3:COLOUR130
 410 PRINTTAB(0,26);"No,";H$
 420 COLOUR3:PRINTTAB(0,30)"Hit Return
for more";:INPUT RB$
 430 IF I$<>A$ THEN 250
 440 NEXTJ
 450 PRINTTAB(0,27)"Eureka! You found
 it. Get on the phonequick!
";:GOTO810
 460 REM
 470 DEFPROC_BLOCK(X,Y,W,H)
 480 MOVE X,Y:MOVE X+W,Y
 490 PLOT 85,X,Y+H
 500 PLOT 85,X+W,Y+H
 510 ENDPROC
 520 DEFPROC_STAT
 530 MC=0:DN=1:MO=0:W=RND(2)
 540 FORI=1TO5
 550 C(I)=INT(RND(1)*4):IF C(I)=MC TH
EN 550
 560 IF C(I)>MC THEN MC=C(I):MO=I
 570 IF C(I)=0 THEN 620
 580 FOR JJ=DN TO DN+C(I)-1
 590 D(JJ)=I
 600 NEXTJJ
 610 DN=DN+C(I)
 620 NEXTI
 630 IF DN/2=INT(DN/2) THEN DN=DN+1:D(D
N)=6
 640 D$="":FORI=1TODN:D$=D$+STR$(D(I))+
", ":NEXT:D$=LEFT$(D$,(DN*2)-1)
 650 TH$="th":MM=INT(DN/2)+1:IF MM=1 TH
EN TH$="st"
 660 IF MM=2 THEN TH$="nd"
 670 IF MM=3 THEN TH$="rd"
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```
 680  IF  W=1  THEN  PROC_MODE
 690  IF  W=2  THEN  PROC_MEDIAN
 700  ENDPROC
 710  DEFPROC_MODE
 720  Q$="What  is  the  mode  of  "+D$
 730  A=MO:A$=STR$(MO)
 740  H$="there  are  more   "+A$+"s"
 750  ENDPROC
 760  DEFPROC_MEDIAN
 770  Q$="What  is  the  median   of  "+D$
 780  A=D(1+INT(DN/2)):A$=STR$(A)
 790  H$=A$+"  is  middle  no."
 800  ENDPROC
 810  END
```