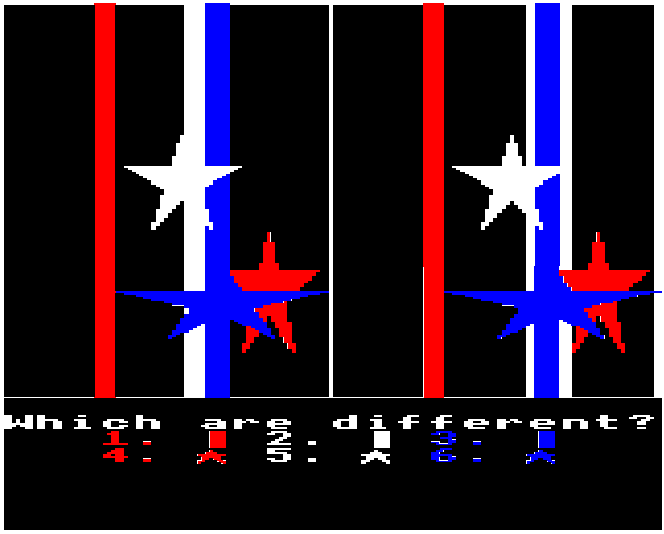
SPOT THE DIFFERENCE



I suppose that this could have been called STARS AND STRIPES, the difference as you will see when you run this colourful eye test.

Two pictures, composed of stars and stripes, in red, white and blue appear on the screen, and you will be asked to identify which of the items is different.

How to play

Items are keyed as follows:

Red Stripe	1
White stripe	2
Blue stripe	3

Red star	4
White star	5
Blue star	6

Identify the differences and key in the number and press RETURN. If you are correct you will hear a high pitched tune, but if you are wrong your answer will be crossed.

To help you, numbers previously keyed in are displayed in brackets. When all the numbers required have been keyed in a further tune will be played. Just hope that it is high pitched for a correct answer.

To continue, or stop, press Y or N or RETURN.

At conclusion you will see your score sheet showing tries, correct answers and time/average taken.

Programming hints

YOU might find the routine PROC_STAR useful in your non-commercial programs as it draws a star. You just have to specify the bottom left-hand corner of the star (X,Y), the width of the bottom of the star (W), the height of the star (H) and the colour that it is to be displayed in (CL).

You could make the puzzle easier by increasing the range of possible values for the shapes that are going to be different. The function FNM(MIN,MAX) is used to define the minimum and maximum value of any shape. Remember if you increase the MAX value you must reduce MIN by the same value, or the picture will extend beyond the allocated area.

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10 REM SPOT THE DIFFERENCE
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   20 REM COPYRIGHT (C) G.LUDINSKI 1983
   30 MODE5:VDU23;8202;0;0;0;19,1,0;0;19
,2,0;0;19,3,0;0;
   40 DIM WH(6),AN$(6)
   50
   60 TIME=0:CR=0:NQ=0
   70 GOTO240
   80 REM
   90 REM RANDOM NUMBER IN RANGE
  100 REM
  110 DEF FNM(MIN,MAX)=INT((MAX-MIN)*RND
(1)+MIN)
  120 REM
  130 REM U.D.G. CALCULATOR
  140 REM
  150 DEF FNB(N$)
  160 TF=0
  170 FOR L=0 TO 7
  180   TF=TF+(2^L)*VAL(MID$(N$,8-L,1))
  190 NEXTL
  200 =TF
  210 REM
  220 REM STARS AND STRIPES
  230 REM
  240 VDU23,224,30,30,30,30,30,30,30,30
  250 VDU23,225,0,FNB("00010000"),FNB("0
0111000"),FNB("11111110"),FNB("01111100"
),FNB("01101100"),FNB("11000110"),FNB("1
0000010")
  260 RI$=CHR$(224):ST$=CHR$(225)
  270 REM
  280 REM START
  290 REM
  300 CLS
  310 NQ=NQ+1
  320 REM
  330 REM FRAMEWORK
  340 REM
  350 GCOL 0,3:COLOUR3:COLOUR128
  360 MOVE0,256:DRAW1279,256
  370 DRAW1279,1023:DRAW0,1023:DRAW0,256
  380 MOVE640,256:DRAW640,1023
  390 REM
  400 REM DRAW PATTERNS
  410 REM
  420 NZ=0
  430 FOR I=1 TO 6
  440   WH(I)=INT(2*RND(1))
  450   IF WH(I)=1 THEN NZ=NZ+1
  460 NEXTI
  470 IFNZ=0 THEN GOTO430
  480 FOR S=0 TO 1
  490   FOR J=1 TO 3
  500     IF S<>0 THEN GOTO580
  510     X=FNM(J*160-80,160*(J+1)-80)
  520     W=FNM(20,80)
  530     IJ=J
  540     CL=J:IF J=2 THEN CL=3
  550     IF J=3 THEN CL=2
  560     PROC_STRIPE(X,W,CL)
  570     PROC_STRIPE(X+640+(WH(IJ)*FNM(
20,40)),W+(WH(IJ)*FNM(20,40)),CL)
  580     IF S<>1 THEN GOTO680
  590     X=FNM(160,480)
  600     Y=FNM(256,896)
  610     W=FNM(80,2*(640-X)/3)
  620     H=FNM(128,768-Y)
  630     IJ=J+3
  640     CL=J:IF J=2 THEN CL=3
  650     IF J=3 THEN CL=2
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  660       PROC_STAR(X,Y,W,H,CL)
  670       PROC_STAR(X+640+(WH(IJ)*FNM(20
,40)),Y+(WH(IJ)*FNM(20,40)),W+(WH(IJ)*FN
M(20,40)),H+(WH(IJ)*FNM(20,40)),CL)
  680     NEXT J
  690  NEXT S
  700  REM
  710  REM QUESTION
  720  REM
  730  PRINTTAB(0,25)"Which are different
?";:COLOUR1:PRINT"    1. ";RI$;:COLOUR3:P
RINT" 2. ";RI$;:COLOUR2:PRINT" 3. ";RI$
  740  COLOUR1:PRINT"    4. ";ST$;:COLOUR3
:PRINT" 5. ";ST$;:COLOUR2:PRINT" 6. ";ST
$
  750  VDU19,1,1;0;19,2,4;0;19,3,7;0;:PRO
C_ANSWER
  760  COLOUR3
  770  IR$=""
  780  FOR I=1 TO (LEN(A$)+1)/2
  790     I$=INKEY$(0):IF I$="" THEN GOTO7
90
  800     PRINTI$;" (";IR$;")";
  810     KI=0
  820     FOR K=1 TO NA
  830       IF I$=AN$(K) THEN AN$(K)="0":K
I=1:SOUND 1,-15,101,10:IR$=IR$+I$
  840     NEXT K
  850     IF K-0 THEN PRINT" X" ELSE PRINT
  860     RB$=INKEY$(100):VDU11:PRINT"
          ":VDU11
  870  NEXT I
  880  FOR I=1 TO NA
  890     IF AN$(I)<>"0" THEN GOTO 920
  900  NEXTI
  910  GOTO 930
  920  PRINT'"No, ans=";A$:SOUND 1,-15,73
,10:SOUND 1,-15,69,5:GOTO940
  930  PRINT'"Yes, you're right":SOUND 1,
-15,101,30:CR=CR+1
  940  PRINT'"More (Y/N)";
  950  INPUT R$:VDU19,1,0;0;19,2,0;0;19,3
,0;0;
  960  IF R$<> "N" THEN GOTO 300
  970  REM
  980  REM SCORE SHEET
  990  REM
 1000  CLS:PRINT:PRINT"Spot the differenc
e":FOR I=1 TO 9:PRINT:NEXTI
 1010  PRINT:PRINT"Puzzles attempted=";NQ
 1020  PRINT:PRINT"Puzzles correct=";CR
 1030  PRINT:PRINT"Time taken=";INT(TIME/
100):PRINT"secs"
 1040  IF CR<>0 THEN PRINT:PRINT"Time/puz
zle=";INT(TIME/(CR*100)):PRINT"secs"
 1050  PRINTTAB(0,25);:VDU19,3,7;0;:END
 1060  DEFPROC_STRIPE(X,W,CL)
 1070  GCOL 0,CL
 1080  MOVE X,256:MOVE X+W,256
 1090  PLOT 85,X,1024
 1100  PLOT 85,X+W,1024
 1110  ENDPROC
 1120  DEFPROC_STAR(X,Y,W,H,CL)
 1130  GCOL 0,CL
 1140  MOVE X+(W/2),Y+(H/3)
 1150  MOVE X,Y:PLOT 85,X+(W/2),Y+H
 1160  MOVE X+(W/2),Y+(H/3)
 1170  MOVE X+W,Y:PLOT 85,X+(W/2),Y+H
 1180  MOVE X+(W/2),Y+(H/3)
 1190  MOVE X-(W/2),Y+(2*H/3):PLOT 85,X+(
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3*W/2),Y+(2*H/3)
 1200 ENDPROC
 1210 DEFPROC_ANSWER
 1220 A$=""":IM=0
 1230 FOR L=1 TO 6
 1240    IF WH(L)=1 THEN IM=IM+1:AN$(IM)=
STR$(L):A$=A$+STR$(L)+","
 1250 NEXT L
 1260 A$=LEFT$(A$,LEN(A$)-1)
 1270 NA=IM
 1280 ENDPROC
 1290 REM
```