

# PROFIT AND LOSS

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13      Highest score 0      Score 1
      Quiz game 1 - Profit and Loss

Hello, what's your name ?GENEVIEVE
Here are some problems GENEVIEVE

If a shopkeeper buys chocolates for 26
pence and sells them for 30 pence, his
profit as a percentage of his cost price
= 15

Yes, congratulations

More? (Y/N)

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How much do you know about profit and loss?

Do you know how much you would make if you sold your car, or even your bike?

## How to play

You will be given five minutes to answer as many questions as possible, and you may press P and RETURN for pass if you cannot work out an answer.

You will not be penalised for 'passes'.

At the end of five minutes, or sooner if you enter N for NO in answer to the question "do you want any more", your score sheet showing tries, correct answers and

average time per answer will appear. If you wish to proceed, then press Y and RETURN and the program will continue to ask you questions.

You can have two tries at each question if you wish. After the first attempt, you will be given a hint as to the correct answer. If your second answer is wrong, you will be told the solution and how it was obtained.

If you cannot work out an answer then press ? and RETURN and your computer will turn into a calculator and you can then use the normal mathematical symbols on the keyboard. To clear the calculator from the screen press AC and RETURN. For the calculator's answer press = and RETURN. To return to the main game press ? and RETURN. Always remember to press RETURN after each required response.

## **Programming hints**

This program includes a useful procedure that enables a programmer to fit a sentence, or string, of any length onto a screen of any size, without splitting a word between one screen line and another, i.e. wraparound. This procedure is called PROC\_FITIN and is found on line 530.

Assign the string, or sentence in quotes, to variable FL\$. B holds the number of characters on the screen in the case of Mode 4 it is 40. On exit the field FL\$ contains the string, or sentence, re-formatting so no words are split between one 40 column line and another.

You may want to add some different types of problems on profit and loss. To do this, instead of W alternating between -1 and +1, it should be allowed to take a random

value between 0 and one more than the number of problem types you are going to add. The details of the problem must be put in the PROC\_QUESTION procedure. Q\$ holds the question, H\$ the hint, A and A\$ the answer and L\$, M\$ and N\$ the answer and explanation.

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10 REM QUIZ - PROFIT AND LOSS
20 REM COPYRIGHT (C) G.LUDINSKI 1983
30 MODE 4
40 DIM IP$(255)
50 S$=""
60 HC$=" Highest score ":HK$=" Sc
ore "
70 COLOUR1:COLOUR128:PRINT' ' ' " Q
quiz game 1 - Profit and Loss"
80 PRINT' '
90 INPUT"Hello, what's your name ",NA
M$:PRINT'"Here are some problems ";:IF N
AM$<>"NO SOUND" THEN PRINTNAM$ ELSE PRIN
T
100 TIME=0:P=0:MAX=0:C=0:W=1
110 T=1:I$=""
120 P=P+1
130 PROC_QUESTION
140 PRINT' '
150 PRINT:PRINTQ$;" = ";
160 PROC_KEYIN:PRINT
170 IF I$="?" THEN PROC_CALC
180 IF ABS(VAL(I$)-A)<=X AND I$<>" " T
HEN 200
190 GOTO220
200 PRINT'"Yes, congratulations":C=C+1
:PRINT:IF NAM$="NO SOUND" THEN GOTO250
210 SOUND 1,-10,12,10:SOUND1,-10,20,10
:SOUND1,-10,28,10:SOUND1,-10,32,20:SOUND
1,-10,14,20:GOTO250
220 IF T=1 THEN PRINT'"No, "H$", try a
gain.":T=2:RB$=INKEY$(3000):CLS:PRINT' ':
GOTO150
230 PRINT'"Sorry, the answer is = "'L
$','M$
240 PRINT'N$
250 IF TIME>= 30000 THEN PROC_SCORE
260 PRINT'"More? (Y/N)";:PROC_KEYIN:PR
INT
270 IF I$<>"Y" AND I$<>"N" AND I$<>" "
AND I$<>"YES" AND I$<>"NO" THEN 260
280 IF I$="Y" OR I$="YES" OR I$=" " THE
N T=1:CLS:GOTO110
290 PROC_SCORE
300 GOTO900
310 REM
320 DEFPROC_QUESTION
330 L$="":M$="":N$="":B=40:X=1
340 E=RND(9):F=INT(RND(1)*90+10):E$=ST
R$(E):F$=STR$(F)
350 W=-W
360 IF W=1 THEN 430
370 FL$="If a shopkeeper buys chocolat
es for "+F$+" pence and sells them for "
+STR$(E+F)+" pence, his profit as a perc
entage of his cost price"
380 PROC_FITIN:Q$=FL$
390 H$="Percentage profit ="

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        ((sell - cost) / cost) x 100 %
        where sell = selling price
        and cost = cost price"
400 A=INT(E/F*100):A$=STR$(A)
410 L$=A$+" %"
420 M$="as (" +STR$(E+F)+" - "+F$+" ) / "
+F$+" x 100 % = "+STR$(INT(E/F*100))
430 IF W=-1 THEN 520
440 V=E*100:V$=STR$(V)
450 FL$="A dealer wishes to make a pro
fit of "+F$+"%. If the car cost him "+V
$+" then his selling price must be"
460 PROC_FITIN:Q$=FL$
470 H$="Find the profit in money terms
. Then add it to the cost price"
480 A=INT(V+(F*E)):A$=STR$(A):R1$=STR$
(INT(F*E))
490 L$=" "+A$
500 M$="as profit = (" +F$+" /100) x "+V
$+" = "+R1$
510 N$="so selling price = "+V$+" + "+
R1$+" = "+A$
520 ENDPROC
530 DEFPROC_FITIN
540 LF=LEN(FL$):IF LF<= B THEN 620
550 FORI=1TOINT(LF/40)
560 EL=B*I
570 IF MID$(FL$,EL,1)=" " THEN 610
580 IF MID$(FL$,EL+1,1)=" " THEN FL$
=LEFT$(FL$,EL)+RIGHT$(FL$,LF-EL-1):LF=LF
-1:GOTO610
590 FORK=1TO39:IF MID$(FL$,EL-K,1)="
" THEN FL$=LEFT$(FL$,EL-K)+LEFT$(S$,K)+
RIGHT$(FL$,LF-EL+K):LF=LF+K:GOTO610
600 NEXTK
610 NEXTI
620 ENDPROC
630 END
640 DEFPROC_CALC
650 VP=VPOS:PRINTTAB(0,22)" C
calculator Mode "TAB(0,22)
660 B$=""
670 I$=GET$:PRINTI$;:B$=B$+I$:IFI$<>"=
"ANDI$<>"?"ANDB$<>"AC"THEN670
680 IFB$="?"ORIS$="?"THEN720
690 IFB$="AC" THEN PRINTTAB(0,23)S$;TA
B(0,22):B$="":GOTO660
700 IFLEN(B$)<=1 THEN 660
710 PRINTEVAL LEFT$(B$,LEN(B$)-1);TAB(
0,22):GOTO660
720 PRINTTAB(0,22);S$;S$;TAB(0,VP-1):P
ROC_KEYIN:PRINT
730 ENDPROC
740 DEFPROC_KEYIN
750 IX=1:VP=VPOS:HP=POS
760 IP$(IX)=INKEY$(10):IF IP$(IX)=" " T
HEN COLOUR0:COLOUR129:PRINTTAB(0,1);INT(
TIME/100);" ";HC$;MAX;HK$;C:COLOUR1:
COLOUR128:GOTO760
770 PRINTTAB(IX+HP,VP);IP$(IX);:IX=IX+
1:IP$(IX)=GET$:IF IP$(IX)<>CHR$(13) THEN
770
780 I$="":FORI=1TOIX-1:I$=I$+IP$(I):NE
XTI
790 ENDPROC
800 DEFPROC_SCORE
810 CLS
820 PRINT''
830 PRINT'"Number of problems complete
d = ";P

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      840 PRINT'"Number correct = ";C
      850 TM=INT(TIME/100):PRINT'"Time taken
in seconds = ";TM
      860 IF C<>0 THEN PRINT'"Time per probl
em = ";INT(TM/C)
      870 IF C>MAX THEN MAX=C
      880 TIME=0:P=0:C=0
      890 ENDPROC
      900 REM
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