

FnOff
PlotsOff
ClrHome
a+bi
0→0

Disp "*****"
Disp ""
Disp " HL DEQ SOLVER"
Disp ""
Disp "BEN and BRIANNA"
Disp ""
Disp "*****"
Pause
ClrHome

Menu("PICK AN ORDER", "1ST ORDER", 1, "2ND ORDER", 2, "3RD ORDER", 3, "QUIT", 4)

Lbl 1
1→0
Disp "AY+B=0"
Prompt A,B

Lbl 5

solve(AY+B,Y,0,{-1E99,1E99})→M
Goto 9

Lbl 2
Disp "AY²+BY+C=0"
Prompt A,B,C
2→0

Lbl 6

If 0=1:Then:E→A:S→B:T→C:End

((-B+√(B²-4AC))/(2A))→M
((-B-√(B²-4AC))/(2A))→N

If 0=1:Then:Goto 7:End:

Goto 8

Lbl 3

Disp "AY³+BY²+CY+D=0"
Prompt A,B,C,D
3→0
solve(AY³+BY²+CY+D,Y,0,{-1E99,1E99})→P
A→E:AP+B→S:AP²+BP+C→T:AP³+BP²+CP+D→U

1→0
Goto 6

Disp "ROOTS:"

Disp ""
Lb1 7
Disp P
Lb1 8
Disp N
Lb1 9
Disp M

Disp ""
Disp "CONTINUE?"
Pause
prgmDIF
Lb1 4
ClrHome
Stop