

SCRIPTS ON TI68K CALCULATORS (Guide under construction, Apologies, the English language is not my native language)

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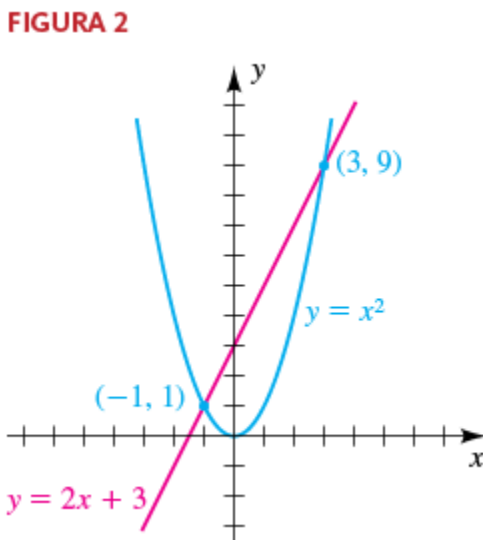
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Comments, suggestions, etc. are welcome at eonicasys@gmail.com

EXAMPLE #1 Solve the following system of two equations and check their solutions.

$$\begin{cases} y = x^2 & ec(1) \\ y = 2 \cdot x + 3 & ec(2) \end{cases}$$

The graphs of equations ec(1) and ec(2) are a parabola and a straight line drawn in figure 2.



Ti 68K script with definitions of variables (requires the program splitsch.v2p)

Entry #	Input: entry line (source code)	Answer #	Output: CAS History
21	C:ClrHome	22	
20	C:setFold(scripts1)	21	
19	C:splitsch() ©"split LCD script:home"	20	
18	C:DelVar eqs, eq1, eq2,answer, slnsX, slnX1, slnX2, slnY1, slnY2, test1, test2	19	
17	C:DelVar x,y	18	
16	C:©"solve the following system of equations"	17	
15	C:©"and check their solutions."	16	
14	C:{ y = x^2, y = 2*x + 3 }→eqs	15	{ y = x^2, y = 2*x + 3 }
13	C:eqs[1]→eq1	14	y = x^2
12	C:eqs[2]→eq2	13	y = 2*x + 3
11	C:(eq2 eq1)→answer	12	x^2 = 2*x + 3
10	C:answer - (2*x + 3)→answer	11	(x^2-2*x-3) = 0
9	C:factor(answer)→answer	10	(x-3)*(x+1) = 0

8	C:{ part(left(answer),1)=0,part(left(answer),2)=0 }→answer	9	{ x-3 = 0, x+1 = 0 }
7	C:{ answer[1]+3, answer[2]-1 }→slnsX	8	{ x = 3, x = -1 };
6	C:slnsX[1]→slnX1	7	x = 3
5	C:slnsX[2]→slnX2	6	x = -1
4	C:(eqs[1] slnX1)→slnY1	5	y=9
3	C:(eqs[1] (slnX1 and slnY1))→test1	4	true
2	C:(eqs[1] slnX2)→slnY2	3	y=1
1	C:(eqs[1] (slnX2 and slnY2))→test2	2	true
0	C:DispHome:done	1	

Screen Capture of source code (TIEDIT Editor)

The screenshot shows the TIEDIT Editor interface with the following source code:

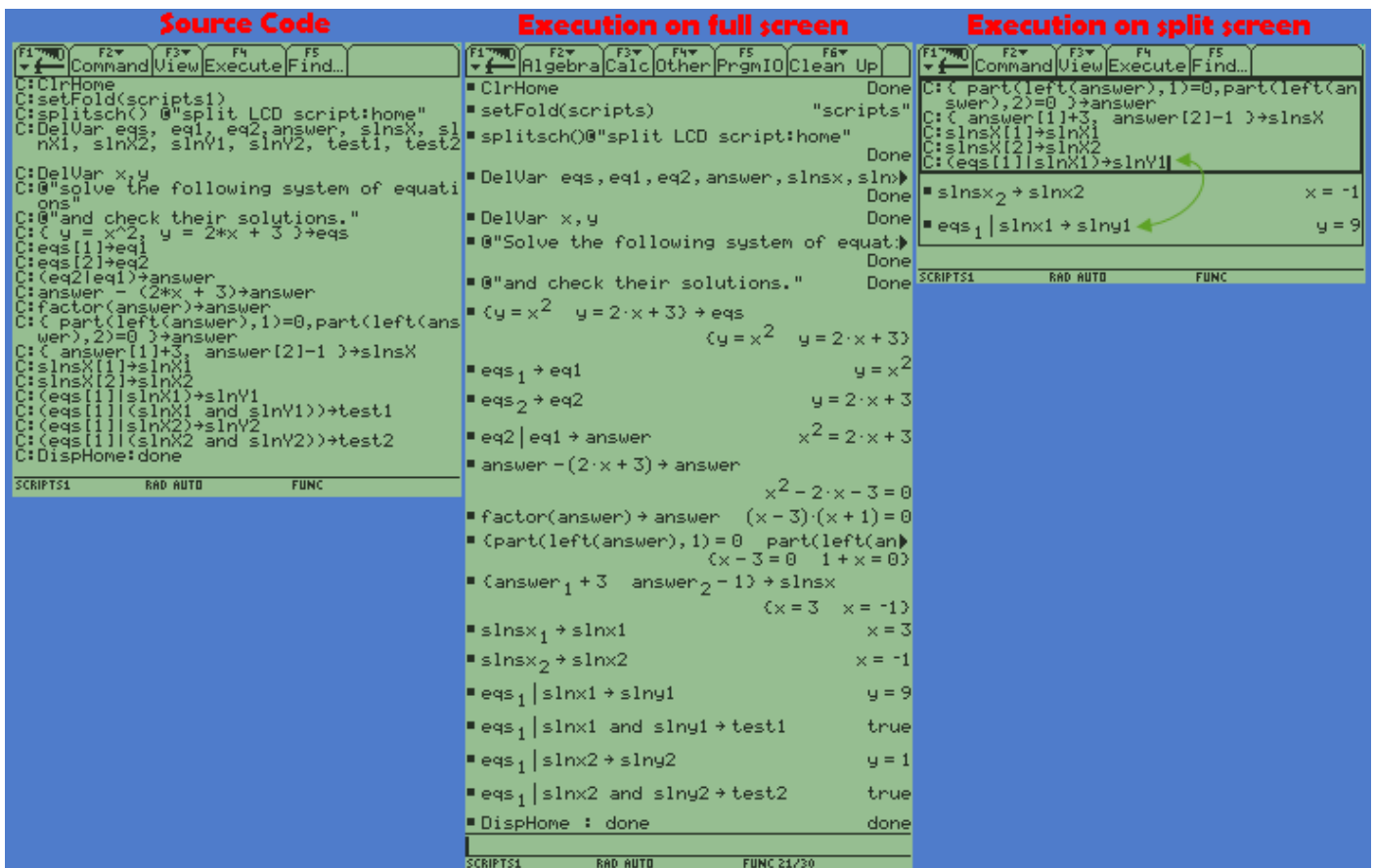
```

2 C:ClrHome
3 C:setFold(scripts1)
4 C:splitsch() @"split LCD script:home"
5 C:DelVar eqs, eq1, eq2,answer, slnsX, slnX1, slnX2, slnY1, slnY2, test1, test2
6 C:DelVar x,y
7 C:@"solve the following system of equations"
8 C:@"and check their solutions."
9 C:{ y = x^2, y = 2*x + 3 }→eqs
10 C:eqs[1]→eq1
11 C:eqs[2]→eq2
12 C:(eq2|eq1)→answer
13 C:answer - (2*x + 3)→answer
14 C:factor(answer)→answer
15 C:{ part(left(answer),1)=0,part(left(answer),2)=0 }→slnsX
16 C:{ answer[1]+3, answer[2]-1 }→slnsX
17 C:slnsX[1]→slnX1
18 C:slnsX[2]→slnX2
19 C:(eqs[1]|slnX1)→slnY1
20 C:(eqs[1]|(slnX1 and slnY1))→test1
21 C:(eqs[1]|slnX2)→slnY2
22 C:(eqs[1]|(slnX2 and slnY2))→test2
23 C:DispHome:done

```

The inset image shows the TiEmu (V200PLT) emulator displaying the script's execution on a virtual TI-84 Plus calculator screen. The screen shows the script's output, including the equations, solutions, and test results.

Run on Tlему emulator



Version converted to program

```

ScrToPrg()
Prgm
ClrIO
setFold(scripts1)
DelVar eqs,eq1,eq2,answer,slnsx,slnx1,slnx2,slny1,slny2,test1,test2
DelVar x,y
Disp "Solve the following system of equations"
Disp "and check their solutions."
Disp "{y=x^2,y=2*x+3}→eqs"
{y=x^2,y=2*x+3}→eqs
Disp eqs
Pause
Disp "eqs[1]→eq1"
eqs[1]→eq1
Disp eq1
Pause
Disp "eqs[2]→eq2"
eqs[2]→eq2
Disp eq2
Pause
Disp "(eq2|eq1)→answer"
eq2|eq1→answer
Disp answer
Pause
Disp "answer-(2*x+3)→answer"
answer-(2*x+3)→answer

```

```

Disp answer
Pause
Disp "▪factor(answer)→answer"
factor(answer)→answer
Disp answer
Pause
Disp "▪{part(left(answer),1)=0,part(left(answer),2)=0}→answer"
{part(left(answer),1)=0,part(left(answer),2)=0}→answer
Pause
Disp "▪{answer[1]+3,answer[2]-1}→slnsx"
{answer[1]+3,answer[2]-1}→slnsx
Disp slnsx
Pause
Disp "▪slnsx[1]→slnx1"
slnsx[1]→slnx1
Disp slnx1
Pause
Disp "▪slnsx[2]→slnx2"
slnsx[2]→slnx2
Disp slnx2
Pause
Disp "▪(eqs[1]|slnx1)→slny1"
eqs[1]|slnx1→slny1
Disp slny1
Pause
Disp "▪eqs[1](slnx1 and slny1)→test1"
eqs[1]|slnx1 and slny1→test1
Disp test1
Pause
Disp "▪(eqs[1]|slnx2)→slny2"
eqs[1]|slnx2→slny2
Disp slny2
Pause
Disp "▪eqs[1](slnx2 and slny2)→test2"
eqs[1]|slnx2 and slny2→test2
Disp test2
Pause
EndPrgm

```

TI-68K Script without definitions of variables (The ASN & ENTRY commands are used)

Entry #					Input: entry line	Answer #	Output: CAS History
17					C:clrHome	17	
16					C:setFold(scripts1)	16	
15					C: splitsch() @"split LCD script:home"	15	
14					C:DelVar eqs, eq1, eq2,answer, slnsX, slnX1, slnX2, slnY1, slnY2, test1, test2	14	
13					C:DelVar x,y	13	
12					C:@ "solve the following system of equations"	12	
11					C:@ "and check their solutions."	11	
10	9	8	7	6	C:{ y = x^2, y = 2*x + 3 }	10	{ y = x^2, y = 2*x + 3 }
9	8	7	6	5	C:ans(1)[2] y=right(ans(1)[1])	9	$x^2 = 2*x + 3$
8	7	6	5	4	C:ans(1) - (2*x + 3)	8	$(x^2 - 2*x - 3) = 0$
7	6	5	4	3	C:factor(ans(1))	7	$(x-3)*(x+1) = 0$
6	5	4	3	2	C:{ part(left(ans(1)),1) = 0,part(left(ans(1)),2) = 0 }	6	{ x-3 = 0, x+1 = 0 }
5	4	3	2	1	C:{ ans(1)[1]+3, ans(1)[2]-1 }	5	{ x = 3, x = -1 };
4	3	2	1	0	C:entry(6)[1] x=right(ans(1)[1])	4	y=9
3	2	1	0		C:entry(7)[1] x=right(ans(2)[1]) and y=right(ans(1))	3	true
2	1	0			C:entry(8)[1] x=right(ans(3)[2])	2	y=1
1	0				C:entry(9)[1] x=right(ans(4)[2]) and y=right(ans(1))	1	true
0					C:done	0	done

Links:

TI68K-CALCS PROGRAM AND SCRIPT EDITOR: <http://pengels.bplaced.net/index.php/tiedit>

TI68K-CALCS EMULATOR http://lpg.ticalc.org/prj_tiemu/