Program Creation on RPN-67 SD

A short tutorial

In this step-by-step example, we'll create a program card of a program that calculates the cube root of the sum of the stack registers X and Y.

We'll start with a clean machine: remove any card in the card slot by swiping it right.

Enter **W/PRGM** mode, then clear the program memory:

- 1. Tap f CLx
- 2. Tap the following keys:
- f SST A
- 3 h 1/x
- h RTN



3. (Optional)

Tap the display, check your entries, then tap Cancel.

- 4. Double-tap the display to open the Card Manager.
- 5. Tap "+" to create a new card Tap "Program"

6. A card named Untitled Program appears in the category "Unclassified".

Tap Untitled Program:

				Done	Cards	Q	+
Done	Cards	Q	+	Q Find	in title		
Astronomy				(Unclass	sified)		
Solar Position 2 Astronomy	2			Untitled P	Program		
Finance				(Unclassified	(k		
Manhattan Valu	e			Astronoi	my		
Math				Solar Pos Astronomy	ition 2		
Collatz Conject	ure			Finance			
Fibonacci Math				Manhatta Finance	in Value		
Gamma Functio	n			Math			
Please s	Create Card elect type of ne	ew card		Collatz Co Math	onjecture		
				Fibonacci	i		
	Program			Gamma F Math	unction		
	Data			Linear Eq Math	uations in 9 Unknow	vns	
	Duplicate			Rational / Math	Arithmetic in Floatin	ig-Point	
Evtandad Eunat	Cancel			154 cards			?

7. Create a **title**:

Tap the the title, change the text into **Cube Root of x+y**.

8. Define a **category**:

Tap "(Unclassified") Tap "My Programs" Tap "Select"

- 9. (Optional) Add a **description** in the light-gray area.
- 10. Click in the rectangle above the letter **A**. Enter *Calculate*, followed by tab or return.
- 11. Tap Save (in red) at the top (scroll down if necessary).
- 12. Tap **Load** to load the changed card into the calculator.

Back	Loa	d	Save	Û		Back	Loa	d	Save	Û
W/PRGM						W/PRGM				
Untitled Program					Cube Root of x+y					
	(Unclassifie	d)				Ν	/ly Program	IS	
Created:	02.05.21		Mc	odified: never		Created:	02.05.21			Modified: never
						This p of the	orogram calcu	lates the c rs X and Y	ube root o	f the sum
0.01	*LBL A:					0.01	*LBL A:			
001:	61 62	+				001:	61 62	+ +		
003:	03 35 62	3 1/x				003:	35 62	3 1/x		
005:	35 22	RTN				005:	35 22	RTN		
						Calculate				
Α	В	С	D	E		Α	В	С	D	E
DEG	RAD GRD		Calc	Card	(DEG	RAD GRD		Calc	Card
FIX	SCI ENG		DSP 2 -	- +	(FIX	SCI ENG		DSP 2	- +
F0	F1	F2	F3 ?			F0	F1	F2	F3	

006	3 3		DEG		
OFF	ON ON	W/P	RGM	RUN	
1	Cul	be Root of	х+у		
Calculate					
A	В	C	D	E	
2+	GTO	DSP	a	SST	
x s	GSB f	FIX SCI	RND	LBL f	
f	g	STO ST I	RCL	h	
		DSZ (i)	ISZ (i)		
ENTE			EEX GRD		
W/DATA	MERGE	P\$S	CL REG	CL PRGM	
x=0 $x=y$			10 [×]	y	
+	4	5	5	6	
x≠0 x≠y	SIN -1	cc	S −1	TAN -1	
X		2			
	0 R ← P		R	R/S	
x>0 x>y	% %C	H INT	FRAC	-x- STK	
?				(i)	

13. Back in the calculator view, switch to **RUN mode**.

- 14. Enter: **100 ENTER 25** Tap **A** to see the result: 0.33
- 15. This is obviously wrong. It should be 5.00.

16. **Swipe** the card **left** to see the program.

17. There's a \mathbf{y}^{x} instruction missing after step 004.

Δ	Card Content
*LBL # 001: 31 25 002: 61 003: 03 004: 35 62 005: 35 22 006: 84	:: 11 LBL A + 3 : 1/x RTN R/S

18. Swipe right to return to the calculator.

There are **two ways to fix** the program and store it on the card:

19a. In W/PRGM mode, add the missing instruction, double-tap the display, tap the program card, then "Save" and "Load".

OR (as shown below):

19b. In **RUN** mode, **double-tap** the display, then **tap** the **program card** to see the incorrect program.

Tap at the end of step 004, and hit the **return key**. Type **y^x**, then tap in an unused area. Tap the red **Save** button at the top. Tap **Load**.

Back	Load	Done	Û		Back	Loa	ad	Save	Û		
RUN	Loade	d			RUN		Loaded				
Cube Root of x+y						Cut	pe Root of	f x+y			
	My Prog	rams				T	My Progran	ns			
Created: 02.05.	21	Modified: 02.0	5.21, 17:23		Created: 02.05.21 Modified: 02.05.21, 17:23						
This progr of the star	am calculates th ck registers X an	ne cube root of th d Y.	ne sum		This p of the	program calcu stack registe	ilates the c ers X and Y	cube root of '	the sum		
*LB 001: 31 002: 61 003: 03 004: 35 y^x 005: 35	L A: 25 11 LBL A + 3 62 1/x 22 RTN	<u> </u>			001: 002: 003: 004: 005: 006:	*LBL A: 31 25 11 61 03 35 62 35 63 35 22	LBL A + 3 1/x y* RTN				
Calculate					Calculate						
Α	ВС	D	E		Α	В	С	D	E		
DEG RAE	GRD	Prot	ect		DEG	RAD GRD		Pro	otect		
FIX SC	ENG	DSP 2	+		FIX	SCI ENG		DSP 2	- +		
F0	F1 F2	F3 ?	With Regs		F0	F1	F2	F3 ?	With Regs		

20. Enter:

100 ENTER 25

Tap A to see the result: 5.00, as expected



Now remove the card from the calculator and clear the program memory:



21. **Swipe** the card **right**. Tap "Yes, clear memory"

Program memory is cleared, the card disappears. The program doesn't work anymore.

22. **Double-tap** the display.

23. Locate the program card **Cubic Root of x+y** in the list.

24. Double-tap it to **load** the program.

25. Enter values x and y, then tap **A** to verify the program is loaded and working.