HP Forum Archive 13

[Return to Index | Top of Index]

No RPN calcs. anymore??

*Message #1 Posted by **Arun** on 2 Oct 2003, 5:26 p.m.*

Hard to believe but does HP not make RPN scientific calculators anymore? I have a 15C, bought in 1984, and a 48G, bought in 2000. I'd love to get my hands on a 42S or 32SII, or equivalent, but they're priced so exorbitantly on sites like Ebay, etc.

I wonder if HP realized what they're missing by ending production of RPN scientific calculators.

Comments??

Re: Several are on the way . . .

*Message #2 Posted by **Paul Brogger** on 2 Oct 2003, 5:54 p.m.,*
in response to message #1 by Arun

It may be that the HP-12C/CP is the only pure RPN line left.

But H-P is going to make several new models which are optionally (user-selectable) RPN or AOS.

See The Samson Cables Catalog for more info . . .

I like RPN but...

*Message #3 Posted by **Mike** on 2 Oct 2003, 10:13 p.m.,*
in response to message #1 by Arun

I like RPN just as well as others but I don't understand the big deal with RPN vs Algebraic. Neither is really any better (really) than the other. It's simply personal preference.

Being that, the world is comprised of mostly algebraic people. From a business sense, it makes sense to drop the RPN. It is a much smaller market and really offers nothing that can't be done by the algebraic calculators.

It's like FORTH. Many like it but it's a tiny part of the computer segment.

Re: I like RPN but...

*Message #4 Posted by **tmstock** on 3 Oct 2003, 2:38 a.m.,*
in response to message #3 by Mike

I think algebraic mode makes great sense for music majors and Fortran programmers - they are well used to the extra punctuation necessary.

My dad also mentioned that there were bunches of guys at Cornell in the 50's that got along well with those cheapie printed metal slide rules instead of decent Versalogs and Decilons, etc.

I guess it's a matter of taste after all.

Re: I like RPN but...

*Message #5 Posted by **Chris(FLA)** on 3 Oct 2003, 10:44 a.m.,*
in response to message #3 by Mike

> Quote:
>
> I like RPN just as well as others but I don't understand the big deal with RPN vs Algebraic. Neither is really any better (really) than the other. It's simply personal preference.

Fewer keystrokes for a given problem. Wasn't that _one_ of the reasons HP decided to use RPN?

delete: 12345

Re: I like RPN but...

*Message #6 Posted by **Ron Ross** on 3 Oct 2003, 11:30 a.m.,*
in response to message #5 by Chris(FLA)

While that is Hp's advertised reason, the real reason was functions and features vs. adding AOS and giving up functions. The earlier machines (ie Hp35) had very limited memory to add features. RPN made the user keep track of operations, which made for fewer keystrokes as a bonus. This bonus of fewer keystrokes sounds better than, "We don't make algebraics because we can't offer Algebraic input and trig in the same pocket calculator (this applied to the Hp35)." That the Hp35 was so popular and RPN was so good kept RPN as the preferred OS for Hp calcs for the next two decades.

Re: I like RPN but...

*Message #7 Posted by **r. d. bärtschiger.** on 3 Oct 2003, 7:06 p.m.,*
in response to message #3 by Mike

In addition to numerous HP calculators, I also have a few other brands. Whenever I buy another type of calculator I always use the following equation, from page 106 of the HP-67 Owner's Handbook, to test the useability of the new calculator. Using an HP calculator usually takes about 45 seconds to get the correct answer. Using an algebraic calculator usually takes much longer, twenty minutes or more, if it in fact can solve the problem at all. This equation calculates the Mach number given pressure altitude and calibrated air speed. All the variables have been substituted into the equation, you need only calculate the answer.

M= sq. root of [5 [({[(1 + 0.2 [350/661.5]^2)^3.5 -1]

[1- (6.875^10-6) 25500]^-5.2656 } +1)^0.286 -1]]

Even trying to enter this equation into an HP-48GX or 49G+ equation writer is a difficult task.

If you really want to see how much easier RPN is, try to calculate the answer to this problem using an algebraic calculator. Post your answer and an honest estimation of how long it took you and I will then post the correct answer as given in the 67 handbook. I think you will agree the HP is easier.

rdb.

Re: I like RPN but...

*Message #8 Posted by **Ed Look... unless I messed it up** on 3 Oct 2003, 7:53 p.m.,*
in response to message #7 by r. d. bärtschiger.

I used the HP-48G strictly with RPN entry and I got 8.35049933621x10^-13 as the answer, though in about 2 and a half minutes, glancing at the 48G's clock display in the upper right hand corner.

As a note, I first tried my HP-32SII and it didn't work, as I got an "Invalid y^x error". Then I went to my favorite, though somewhat intermittent HP-34C, and got an "Error 0". I broke down and reached for the 48G.

After looking at R. D. Baertschiger's convoluted Mach equation, I WASN'T going to even try with the algebraic HP-20S (and definitely not with the Radio Shack algebraic scientific (cat. no. 65-1081) (double for the Sentry scientific).

Re: I like RPN but...

*Message #9 Posted by **r. d. bärtschiger.** on 3 Oct 2003, 8:05 p.m.,*

in response to message #8 by Ed Look... unless I messed it up

Sorry you thought the equation was convoluted. I tried to copy it as shown in the 67 handbook. The two lines should of course be all on one line. The square root is taken of the entire rest of the equation. As I said, just entering it into the message was a chore. As to your answer... Sorry, wrong answer. Please try again.

rdb.

Re: I like RPN but...

*Message #10 Posted by **Ed Look** on 4 Oct 2003, 11:49 a.m.,*
in response to message #9 by r. d. bärtschiger.

Mr. Baertschiger, this time I got 0.835724535179 (to include all the digits) again using the HP-48G, but it took one minute and a half, using Mr. Hardman's display of the equation.

Please allow me to point out that on your posting, you specified 6.875^10-6, which I did not understand properly (and I apologize!) when I expected 6.875x10^(-6).

Re: I like RPN but...

*Message #11 Posted by **r. d. bärtschiger.** on 4 Oct 2003, 12:24 p.m.,*
in response to message #10 by Ed Look

Yes! You are correct. I just realized this mistake myself a few minutes ago. I was about to post a correction. I guess it is a little late now for that. I think you will agree however, that rpn is much easier than any other method.

rdb.

Re: I like RPN but...

*Message #12 Posted by **Ed Look** on 4 Oct 2003, 2:31 p.m.,*
in response to message #11 by r. d. bärtschiger.

Hee hee hee... you are preaching to the converted! After my first taste of RPN, I was hooked. It was the 34C, by the way.

And since now I have the correct Mach equation, I'll try it again on the 34C (if I can get all the LEDs to light up) and on the 32SII. If you are interested, I'll let you know how I did.

Re: I like RPN but...

*Message #13 Posted by **el** on 5 Oct 2003, 2:19 a.m.,*
in response to message #9 by r. d. bärtschiger.

Is the answer 6.9541e-1? I used my 32sii. I love rpn, but after 7.5 hrs of hw, and a bru-ski, well..you know.

el

Re: I like RPN but...

*Message #14 Posted by **Ed Look** on 5 Oct 2003, 2:46 a.m.,*
in response to message #13 by el

No. Check one of Mark Hardman's posts in the thread; he has a corrected version of the way the equation is laid out. I strongly suspect you may have calculated using an incorrect version of it.

Re: I like RPN but...

*Message #15 Posted by **r. d. bärtschiger.** on 3 Oct 2003, 8:37 p.m.,*
in response to message #8 by Ed Look... unless I messed it up

I just re-read your answer, remember we are looking for a mach number for an airplane in flight. Therefore the answer will be between ca. .25 & 1.

I have entered this equation into a word document where it looks as it should. However I have not been able to figure out how to paste the equation by itself into a message here on the museum.

rdb.

Mach No Formula = Re: I like RPN but...

*Message #16 Posted by **Mark Hardman** on 3 Oct 2003, 9:15 p.m.,*
in response to message #7 by r. d. bärtschiger.

How is this?

Edited: 3 Oct 2003, 9:16 p.m.

Re: Mach No Formula = Re: I like RPN but...

*Message #17 Posted by **r. d. bärtschiger.** on 3 Oct 2003, 9:23 p.m.,*
in response to message #16 by Mark Hardman

Yes. That is the equation exactly. May I be so bold as to inquire how you entered it here? Thank you.

rdb.

Re: Mach No Formula = Re: I like RPN but...

*Message #18 Posted by **Mark Hardman** on 3 Oct 2003, 9:34 p.m.,*
in response to message #17 by r. d. bärtschiger.

Nothing magical. I cut the image straight out of the HP-67 manual on the MoHPC DVD, saved it as a .gif and uploaded it to my web site.

By the way, I was able to crank through this in 10'13" using the low end HP-20S. I ran out of paren () levels well before the inner-most 350/661.5 term. I had to start over and use a storage register.

The answer is 0.8357.

It took me 2'43" to get the same result on a HP-41CX.

Mark Hardman

Re: Mach No Formula = Re: I like RPN but...

*Message #19 Posted by **r. d. bärtschiger.** on 3 Oct 2003, 9:45 p.m.,*
in response to message #18 by Mark Hardman

Mr. Hardman:

Your answer is correct, however I was hoping Mike would respond.

rdb.

Re: Mach No Formula = Re: I like RPN but...

*Message #20 Posted by **Eric Lundgren** on 5 Oct 2003, 2:35 a.m.,*
in response to message #19 by r. d. bärtschiger.

Whoo! Ok, I got it on my third try. 8.3472e-1 on my favorite machine as of now, the orange/blue printed 32sii! This is a great way to unwind after a stressy day! I'd love to see the ti kids fiddling with this one....'hang on my -89 says I'm missing a parenthesis...uh..hmmm..lemme start over....hey what'd you get?' Great fun. No hard feelings ti-sypathetics, I got through my first physics course with an 86.

el

for the records...

*Message #21 Posted by **R Lion (España)** on 4 Oct 2003, 10:53 a.m.,*
in response to message #16 by Mark Hardman

I got the correct answer at first attempt on my 15c and on my 48GX, but I needed three attempts on my algebraic Casio fx-4000p :-P
I love RPN

Raul

Edited: 4 Oct 2003, 10:55 a.m.

Re: I like RPN but...

*Message #22 Posted by **r. d. bärtschiger.** on 3 Oct 2003, 9:47 p.m.,*
in response to message #7 by r. d. bärtschiger.

The correct answer is: 0.835724535179

given in the 67 handbook as 0.84

The proper key stroke sequence is:

350 ENTER

661.5 /

X^2

.2 *

1 +

3.5 Y^X

1 -

1 ENTER

6.875 EEX CHS 6

ENTER

25500 *

-

5.2656 CHS Y^X

*

1 +

.286 Y^X

1 -

5 *

SQ. ROOT

rdb.

Re: I like RPN but... not rpn (71b version)

*Message #23 Posted by **Terry Ingram** on 4 Oct 2003, 1:10 a.m.,*
in response to message #22 by r. d. bärtschiger.

The same equation keyed into a 71b...

SQR(5*((((1+.2*(350/661.5)^2)^3.5-1)*(1-(6.875E-6)*25500)^(-5.2656)+1)^.286-1))

I'm a fan of RPN also.

Terry

Re: I like RPN but... any 48gx equation writer examples

*Message #24 Posted by **Terry Ingram** on 4 Oct 2003, 12:54 p.m.,*
in response to message #23 by Terry Ingram

Can a 48gx user please post a step-by-step procedure for solving the Mach problem posted by Mark Hardman, usign the equation writer of the 48gx?

I have a 48gx, but have only learned how to use the basic rpn operations. This would be a big help to see side-by-side examples/procedures.

If the equation writer is not the best way to solve this, are there another way, besides using the rpn keystrokes as listed in a previous post?

Thanks, Terry

Re: I like RPN but... any 48gx equation writer examples

*Message #25 Posted by **r. d. bärtschiger.** on 4 Oct 2003, 1:32 p.m.,*
in response to message #24 by Terry Ingram

The easiest way is is to use the rpn keystrokes as I listed them earlier. I have also tried to enter this equation into the equation writer of both a 48gx and a 49g+. It can be done, but is much more difficult because you can not see all of the equation at one time as it takes up more and more of the screen. Also making corrections is not very straight forward.

I will try to to make a list of the necessary keystrokes to enter it into the equation writer and post the list later.

rdb.

Re: I like RPN but... any 48gx equation writer examples

*Message #26 Posted by **r. d. bärtschiger.** on 4 Oct 2003, 3:19 p.m.,*
in response to message #25 by r. d. bärtschiger.

y^x 0.286

right arrow

- 1

enter

You should now store the equation:

'machno' STO

If the equation was entered correctly, then pressing

'machno'

then 'eval' should return 0.84.

If not then check the equation as entered and edit it as necessary.

rdb.

Re: I like RPN but... any 48gx equation writer examples

*Message #27 Posted by **Terry Ingram** on 4 Oct 2003, 3:42 p.m.,*
in response to message #26 by r. d. bärtschiger.

Thanks for this example. I'll give it a try...

Looks quite a bit more complicated than RPN. In fact, almost everything that I try to accomplish with the 48gx takes longer and is more difficult than the more simple RPN keystroke models.

I'm not trying to bash the 48gx, but only admitting that I don't fully understand how to operate the machine, but still want to continue trying to learn.

Your equation editor procedure will certainly help.

Can the 48gx also use parenthesis to solve the Mach formula without using the equation editor, similar to the 71b listing previously posted?

I use RPN (41cv, 32Sii)for a lot of calculations, but still find the 71b style of entry easy for some formulas also.

Thanks again for your time, Terry

Re: I like RPN but... any 48gx equation writer examples

*Message #28 Posted by **r. d. bärtschiger.** on 4 Oct 2003, 4:10 p.m.,*
in response to message #27 by Terry Ingram

Can the 48gx also use parenthesis to solve the Mach formula without using the equation editor, similar to the 71b listing previously posted?

Yes. However you need to add a few more pairs of parenthesis at certain places, there are already enough of these, and then if you need to edit the equation, it will be loaded into the equation writer anyway. Why not just stick with 'rpn'? Much easier.

rdb.

Re: I like RPN but... any 48gx equation writer examples

*Message #29 Posted by **GE (France)** on 4 Oct 2003, 5:49 p.m.,*
in response to message #28 by r. d. bärtschiger.

Interesting test. When I tried it, two strange things happened : 1) I typed the equation in under 30 seconds on the algebraic machine that was available at the time (shame prevents me from saying what it was, but it's under the $50 tag) 2) The result displayed is 0.8279147828

Can this test be THAT simple and the result be THAT inaccurate ??

MetaKernel 48gx equation writer examples

*Message #30 Posted by **R Lion (España)** on 4 Oct 2003, 6:03 p.m.,*
in response to message #29 by GE (France)

With the MetaKernel, the equation writer is diferent and faster (very very faster)

Sq root
5
*
1

+
1
right
yx
.286
right
-
1
enter

EVALuating this, you must get 0.835724535179

Edited: 4 Oct 2003, 6:08 p.m.

Re: I like RPN but... any 48gx equation writer examples

*Message #31 Posted by **r. d. bärtschiger.** on 4 Oct 2003, 6:58 p.m.,*
in response to message #29 by GE (France)

Hard to say why your answer is different. Perhaps you entered a number wrong or a function. The point is; Now that you see that a wrong answer could happen are you really ready to trust algebraic input? I am not, therefore I will continue to use rpn.

rdb.

Re: I like RPN but... any 48gx equation writer examples

*Message #32 Posted by **Mark Hardman** on 4 Oct 2003, 7:15 p.m.,*
in response to message #29 by GE (France)

You mis-keyed the 25,500 term. I get the same (wrong) answer if I use 25,000. This mistake likely was caused by your need to concentrate on the level of parens in use and not on the values being entered.

<grin>

Mark Hardman

Edited: 4 Oct 2003, 7:16 p.m.

Re: I like RPN but... you are right. RPN is easier

*Message #33 Posted by **Terry Ingram** on 4 Oct 2003, 9:10 p.m.,*
in response to message #28 by r. d. bärtschiger.

There's no argument here. I like RPN too.

I still like to use the 71b and probably would vote the 71b as my "must have" calculation device. I just wish the machine had RPN style entry. I sometimes use the RPNLEX file created by JR Baker with the 71b. This is really a great lex file, but the program is missing storage register ability.

Thanks again for the procedure listings, Terry,

Re: I like RPN but... any 48gx equation writer examples

*Message #34 Posted by **Rodger Rosenbaum** on 5 Oct 2003, 4:41 a.m.,*
in response to message #26 by r. d. bärtschiger.

A much easier way to get it into the Equation writer is to simply type in:
'Sqrt(5*(((((1+.2*(350/661.5)^2)^3.5-1)*(1-6.875E-6*25500)^-5.2656)+1)^.286-1))'
(type the square root symbol on the keyboard instead of Sqrt)
Then press the down arrow on the keyboard to begin editing in the Equation writer.
You will see the expression in all its glory. Scroll back and forth with the left and right arrow keys.

Correct answer is...

*Message #35 Posted by **Tizedes Csaba** on 6 Oct 2003, 4:12 p.m.,*
in response to message #22 by r. d. bärtschiger.

> Quote:
>
> given in the 67 handbook as 0.84

I think, this is the correct answer. I don't know what's that formula (but I'll an mechanical engineer - specialised for fluid's mechanics).

That's seems to me like a empirical formula. And all of terms have got 4-5 significant digits. If we use this calculations, the result's significant digits no more than 2 or 3.

And what's this M really ;) ? (M=0.84 is enough, I think...)

Csaba

Re: No RPN calcs. anymore??

*Message #36 Posted by **Valentin Albillo** on 3 Oct 2003, 8:47 a.m.,*
in response to message #1 by Arun

Arun posted: *"I wonder if HP realized what they're missing by ending production of RPN scientific calculators."*

First, there's no "ending" at all, HP's releasing new scientific calculators with RPN and/or RPL modes right now.

Second, HP would miss *nothing* if they stopped dead production of RPN/RPL calculators altogether. Only a bunch of die-hards like us care at all about RPN, the 99.999% of people using a calculator couldn't care less about it, and it's not clear at all that they're "missing" anything and need to be "saved" from their error in not realizing just how superior RPN is, because to begin with, it actually isn't. The mere fact that you or me like it does not make it "superior" in the least.

That being so, HP is not a charity but a profit-driven organization, and if RPN calcs aren't economically profitable, which frankly they aren't, they're doing the right thing dropping them out of production. If it were your enterprise and your money, you'd do the same.

Anyway, you'll be able to sharpen your teeth with the new Kinpo ... erm, I mean HP, models. They'll calm your addiction for a while but think twice before introducing any children of yours to the joys of RPN: it's a crippling, blinding addiction for sure. Or would you prefer to be in the losing side of the Beta vs. VHS rage ? :-)

Best regards from V.

Re: No RPN calcs. anymore??

*Message #37 Posted by **Larry Corrado, USA (WI)** on 3 Oct 2003, 8:23 p.m.,*
in response to message #36 by Valentin Albillo

I think valentin's post makes the most sense of anything I've read in the Forum today.

LC

Re: No RPN calcs. anymore??

*Message #38 Posted by **Wayne Brown** on 4 Oct 2003, 10:16 a.m.,*
in response to message #37 by Larry Corrado, USA (WI)

> Quote:
>
> I think valentin's post makes the most sense of anything I've read in the Forum today.

It makes sense if you think of HP as just another moneygrubbing company trying to make a few bucks. I used to think HP was better than that...

Re: No RPN calcs. anymore??

*Message #39 Posted by **Euclid (Jack)** on 4 Oct 2003, 2:51 a.m.,*
in response to message #36 by Valentin Albillo

Valentin Albillo said, in response to No RPN calcs. anymore??, posted by Arun

They'll calm your addiction for a while but think twice before introducing any children of yours to the joys of RPN: it's a crippling, blinding addiction for sure. Or would you prefer to be in the losing side of the Beta vs. VHS rage ? :-)

******

Go ahead and introduce your kids to the joys of RPN. With computers decreasing in size and increasing in power and portibility, there will always be plenty of "software" RPN for the beautiful minds, even if HP does manage to kill the hardware version. RPN WILL LIVE ON!

It's too late for Beta though, Sorry.

Euclid www.livingsoftware.net

Re: No RPN calcs. anymore??

*Message #40 Posted by **Eric Lundgren** on 5 Oct 2003, 3:04 a.m.,*
in response to message #39 by Euclid (Jack)

Well, I'd rather be an RPN user forced to convert back to algebraic, that poses no difficulty. The only problem is being a little slower for a while. Now, learning rpn, and I mean REALLY learning rpn, is something that takes some effort.

I used to be a power house algebraic ti86-er, yeah I could evaluate expressions quickly, but after returning to the rpn platform, I appreciate the thought process that is involved with rpn. Consider this, using rpn takes some thought, algebraic does not really. I get some satisfaction from knowing that thought goes into my calculations, and that I'm not just a data-enterer. I understand that there are people out there committed to algebraics, and that is ok with me. I think that you will become fluent in any form of entry you practice. Let's all just enjoy what we have and appreciate that we have choices, :)