Vive la Guerre

I have a few comments on Bruce Carbrey's article "A Pocket Computer? Sizing up the HP-41C." (See the December 1980 BYTE, page 244.) The article was very interesting, since I use both an HP-41C and a TI-59 frequently. Mr Carbrey did a comparison that I had planned but had never done.

On page 246, he states that storing a number in a register on a TI-59 requires three lines. This applied to the earlier SR-52, but only two lines are needed with a TI-59. Two is better than three, but the one-line approach of the HP-41C is better. It makes editing a program without a printer much easier, especially since you don't have to remember key codes.

Mr Carbrey's benchmark test program does not, however, use the TI-59's strengths well. A major difference between the calculators is that both label and absolute addressing exist on the TI-59, while the HP-41C uses only labels. Since the HP-41C program is compiled, it is not penalized. Using absolute addressing in the TI-59 program cuts run time by 3 seconds and saves a step.

Listing 1 is a benchmark program that uses the TI-59's parenthesis feature. This seemed especially apt considering Hewlett-Packard's and Texas Instruments' battle over Reverse Polish Notation vs Algebraic Operating System. My program is 10 steps shorter, uses 4 data registers, and runs in 33 seconds. This improved performance is achieved by reducing the number of relatively slow memory arithmetic operations and utilizing the TI-59's stack. (Also note that the correct answer in Mr Carbrey's table 1, on page 254, is $17553.30, not $17533.30.)

Listing 1

000	76	LBL
001	11	A
002	58	FIX
003	02	02
004	42	STO
005	01	01
006	91	R/S
007	42	STO
008	02	02
009	91	R/S
010	42	STO
011	03	03
012	91	R/S
013	55	÷
014	01	1
015	00	0
016	00	0
017	85	+
018	01	1
019	95	=
020	42	STO
021	04	04
022	45	Y^x
023	43	RCL
024	02	02
025	94	+/−
026	65	×
027	43	RCL
028	01	01
029	85	+
030	53	(
031	00	0
032	85	+
033	43	RCL
034	04	04
035	45	Y^x
036	43	RCL
037	02	02
038	94	+/−
039	97	DSZ
040	02	02
041	00	00
042	32	32
043	54	)
044	65	×
045	43	RCL
046	03	03
047	95	=
048	91	R/S

Much has been made of the HP-41C's plug-in accessories, but I wonder if they are really a major design change. They obviously follow TI's development of the printer attachment and Solid State Software. The HP printer has excellent print quality and features, but it is very slow. The Bar-Code reading "Wand" is the only significant advance in my opinion.

The capacities of the two calculators are about equal in my experience. Most users want both a printer and a card

reader, so only two memory modules can be added. Thus, a maximum of 830 program lines is available without data registers in practical applications, and this limit is quickly reduced. Even allowing for the HP-41C's greater storage efficiency (I find a 50% improvement over the TI-59), the HP-41C is only marginally better.

The lack of a TI response to the HP-41C threat mystifies me. Although users were surveyed last spring, no new product has appeared. The discounts being offered on TI's "59" calculators clearly suggest that something is coming soon, but it has been a year since the HP-41C's introduction. Perhaps the pocket computers from Radio Shack and Sharp threw a wrench into the works. TI has always played a game of increased capacity at lower cost in the programmable-calculator marketing wars. I await TI's next entry with great anticipation. Users have profited immensely from the battles between Hewlett-Packard and Texas Instruments in this market. (Take out your old calculator and try using it now.) Vive la guerre!!!

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