

ADDITIONAL FUNCTIONS FOR YOUR POCKET CALCULATOR

BY KNOWING a few simple procedures, you can make your "under-\$100" calculator do functions found only on more expensive models. Positive integral exponents, reciprocals, and square roots, for example, can be done quickly and easily.

The procedure for calculating x^2 , x^3 , or x^n is: enter the number, activate the constant, push the multiply button, and push the equals button $n - 1$ times. For example, to calculate 3.7^5 , you would use the following procedure: (3); (.); (7); (K); (\times); (=); (=); (=); (=). Read 693.44.

Reciprocals and other negative integral exponents (x^{-1} , x^{-2} , . . . x^{-n}) can be calculated by entering the number, activating the constant, pushing the divide button, and pushing the equals button $n + 1$ times. For example, 5.2^{-1} would have the following procedure. (5); (.); (2); (K); (\div); (=); (=). Read 0.1923.

The process of finding square roots is a little more complicated, but after doing it a few times, it too is simple and quick. The easiest way to explain it is through an example. To find the square root of 8, first enter 8, then divide by an approximate square root. Try 3. The result should be 2.6666666. Add the approximate square root to this reading. Thus, $2.6666666 + 3 = 5.6666666$. Now divide this by 2. The answer, an approximate square root of 8 is 2.8333333. For greater accuracy repeat the process. Thus, $8/2.8333333 = 2.8235$. Again, add the two together and divide by two: $2.8235 + 2.83333 = 5.6568$. And $5.6568/2 = 2.8284$, a more accurate answer. This, of course, is simply a matter of finding a range and then narrowing the range.

These functions are very handy in electronic calculation. —Edward C. Priest