Numerical Integration Program (TI-85)

This program calculates left and right Riemann sums, and the trapezoidal and midpoint approximations. Since there’s no room on the calculator for a separate labeling of each approximation, we use a compressed method of displaying the results. For instance, the label LEFT/RIGHT indicates that the next two numbers are the left- and right-hand Riemann sums, respectively.

Notes:
1. Select ‘PRGM’ to get the program menu, then select ‘EDIT’ to enter a program. When you enter a program, you must first give it a name (for example, ‘INTEG’). To finish editing, hit EXIT.
2. The function to be integrated must be entered as $y1$ (accessed by GRAPH, followed by $y(x) =$). When $y1$ occurs in a program, it is evaluated at the current value of $x$.
3. The lower limit of integration must be less than the upper limit.
4. IS > ( is selected from under CTL, while enter entering the program. “Disp” and “Input” are selected from under I/O.
5. Use MORE to see items on a menu which are currently off the screen.
6. To run a program, select PRGM, NAMES. To stop a program while it is running, hit ON.
7. Test the program by evaluating $\int_{1}^{3} x^3 \, dx = 20$, using 100 subdivisions. You should get left- and right-hand sums of 19.7408 and 20.2608, respectively. For the trapezoid approximation, you should get 20.0008. For the mid point approximation, you should get 19.9996. For Simpson’s rule, you should get exactly 20.
Name=INTEG

Where to Find The Commands

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