Simpsons_rule (Calls: 1, Time: 356.570 s)

Generated 16-Jul-2023 12:19:12 using performance time.
Script in file G:\My Drive\Papers\Summer 2023\MATH 141\Matlab\Simpsons_rule.m
Copy to new window for comparing multiple runs

Parents (calling functions)

No parent

Lines that take the most time

Line Number	Code	Calls	Total Time (s)	% Time	Time Plot
17	`x = vpa(f(a + (deltaX * (i - 1))));`	100001	311.575	87.4%	
21	`sum = sum + (alt * x);`	100001	44.754	12.6%	
7	`syms f(x)`	1	0.087	0.0%	
3	`clf`	1	0.039	0.0%	
4	`close all`	1	0.030	0.0%	
All other lines			0.086	0.0%	
Totals			356.570	100%	

Children (called functions)

Function Name	Function Type	Calls	Total Time (s)	% Time	Time Plot
symfun.symfun>symfun.subsref	Class method	100001	287.036	80.5%	
sym.sym>sym.mtimes	Class method	100002	25.326	7.1%	
sym.vpa	Function	100002	20.048	5.6%	
sym.plus	Function	100002	16.819	4.7%	
sym.sym>sym.delete	Class method	200008	3.005	0.8%	
syms	Function	1	0.086	0.0%	
clf	Function	1	0.038	0.0%	
close	Function	1	0.029	0.0%	
sym.disp	Function	1	0.013	0.0%	
sym.sym>sym.subsasgn	Class method	1	0.008	0.0%	
sym.sym>sym.mpower	Class method	1	0.002	0.0%	
sym.cos	Function	1	0.000	0.0%	
sym.sqrt	Function	1	0.000	0.0%	
symfun.symfun>symfun.delete	Class method	3	0.000	0.0%	
Self time (built-ins, overhead, etc.)			4.159	1.2%	

Totals			356.570	100%	

Code Analyzer results

Coverage results

Show coverage for parent folder

Total lines in function	28	
Non-code lines (comments, blank lines)	2	
Code lines (lines that can run)	26	
Code lines that did run	26	
Code lines that did not run	0	
Coverage (did run/can run)	100.00 %	

Function listing

Time	Calls	Line	
0.003	1	1	clear
< 0.001	1	2	clc
0.039	1	3	clf
0.030	1	4	close all
< 0.001	1	5	format long
		6	
0.087	1	7	syms f(x)
0.012	1	8	f(x) = sqrt(1 + cos(x)^2);
< 0.001	1	9	a = 0;
< 0.001	1	10	b = pi / 4;
< 0.001	1	11	n = 100000;
< 0.001	1	12	deltaX = (b - a) / n;
		13	
< 0.001	1	14	sum = 0;
< 0.001	1	15	alt = 4;
< 0.001	1	16	for i = 1:(n + 1)
311.575	100001	17	x = vpa(f(a + (deltaX * (i - 1))));
0.016	100001	18	if(i == 1 || i == (n + 1))
< 0.001	2	19	alt = 1;
0.004	100001	20	end
44.754	100001	21	sum = sum + (alt * x);
0.011	100001	22	if (alt == 4)
0.004	50000	23	alt = 2;
0.004	50001	24	else
0.002	50001	25	alt = 4;
0.006	100001	26	end
0.010	100001	27	end

```
0.014        1    28   disp(vpa((deltaX / 3) * sum));
```