5.1.C1

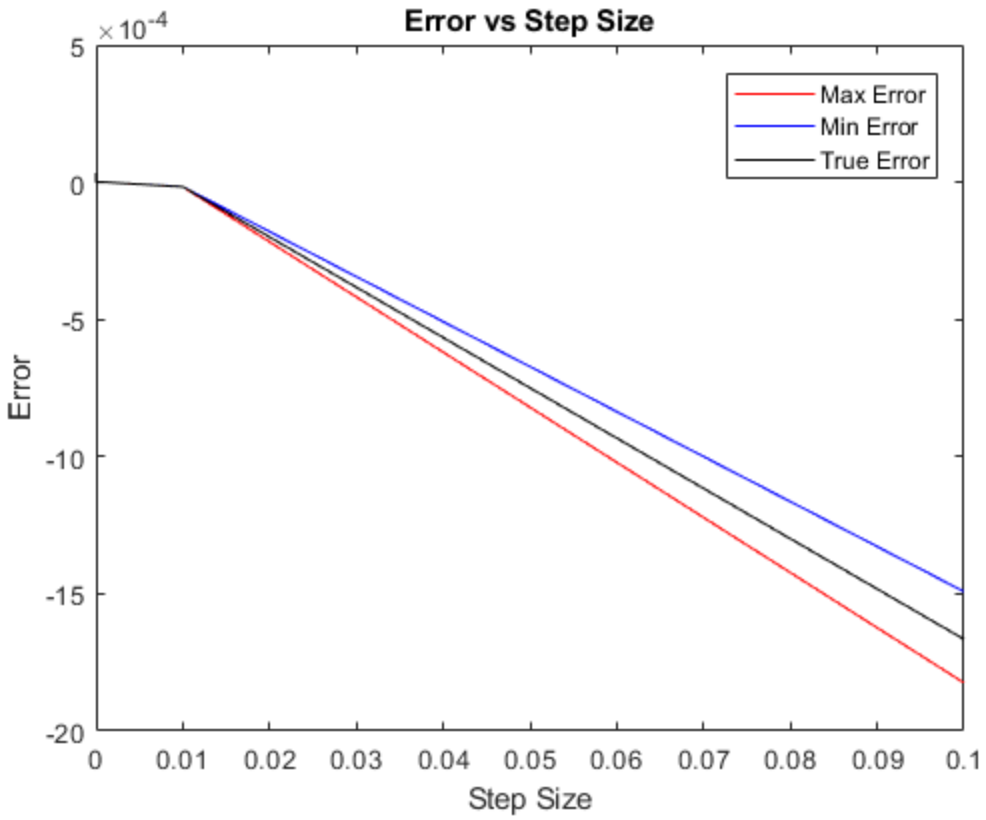
Columns 1 through 3

"h"	"Actual Derivative…"	"Estimated Derivat…"
"0.1"	"1"	"0.99833"
"0.01"	"1"	"0.99998"
"0.001"	"1"	"1"
"0.0001"	"1"	"1"
"1e-05"	"1"	"1"
"1e-06"	"1"	"1"
"1e-07"	"1"	"1"
"1e-08"	"1"	"1"
"1e-09"	"1"	"1"
"1e-10"	"1"	"1"
"1e-11"	"1"	"1"
"1e-12"	"1"	"1"

Columns 4 through 6

"Theoretical Max E…"	"Theoretical Min E…"	"Actual Error"
"-0.0018247"	"-0.001492"	"-0.0016658"
"-1.6832e-05"	"-1.6499e-05"	"-1.6667e-05"
"-1.6683e-07"	"-1.665e-07"	"-1.6667e-07"
"-1.6668e-09"	"-1.6665e-09"	"-1.6671e-09"
"-1.6667e-11"	"-1.6666e-11"	"-1.5653e-11"
"-1.6667e-13"	"-1.6667e-13"	"-2.6755e-11"
"-1.6667e-15"	"-1.6667e-15"	"-5.2636e-10"
"-1.6667e-17"	"-1.6667e-17"	"-5.2636e-10"
"-1.6667e-19"	"-1.6667e-19"	"2.7229e-08"
"-1.6667e-21"	"-1.6667e-21"	"8.274e-08"
"-1.6667e-23"	"-1.6667e-23"	"8.274e-08"
"-1.6667e-25"	"-1.6667e-25"	"3.3389e-05"

Actual error is withing bounds of theoretical error



5.2.1a

```
Using the trapezoid rule with 16 panels gives us a value of 1.9986
 with an error of 0.0013618
Using the trapezoid rule with 32 panels gives us a value of 1.9997
 with an error of 0.00034032
```

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