Problem 3:

The following pages contain the outputs of a recursive simpsons rule implementation until the error of 10^-6 is achieved, this is at around 8 slices.

```
C:\Users\lab\Dropbox\Computational Physics\Jinesh_HW3>
C:\Users\lab\Dropbox\Computational Physics\Jinesh_HW3>python -i Prob2.py
>>> adaptive_simpsons_rule(0,1,10**-6)
1
0.384316048893
2
0.348385615768
3
0.0628683313301
4
0.0329167015817
5
0.0438018315703
6
0.0237707758436
7
0.0085728403103
8
0.00256146483471
8
0.00601331376376
7
0.0152497915543
8
0.00752618801154
8
0.00772493977471
6
0.0211766191813
7
0.0130869542981
8
0.00709259779968
8
0.00599524890157
7
0.00811275723792
8
0.00470335966699
8
0.00340996845166
5
0.00552988451403
6
0.00430138622725
7
0.00353976648441
8
0.00224613280146
8
0.00129397659045
7
0.000769893568128
6
0.00136645491321
7
0.000108637274066
7
0.00125925302126
4
0.0939642867648
5
0.0324120935205
6
0.0103119799316
7
0.00365282280729
7
0.00665804273515
6
6
0.00877649946464
6
0.0026831870049
4
0.0198050642396
5
0.00170505492018
6
0.000196877083447
6
0.00151576975405
5
0.0182179649159
2
0.226247549261
3
0.2071220395
4
0.104566424069
5
0.0441103359722
6
0.0190639614462
6
0.0250422159439
5
0.0603088712332
6
0.0292297631287
6
0.03107469166
4
0.0991293136961
5
0.0581120552713
6
0.0304601014498
6
0.0276495917284
5
0.0409819823808
3
0.0331256062864
4
0.0233813336309
5
0.0193942858984
6
0.0122189835883
6
0.00717701884529
5
0.00405258016321
6
0.0032429184635
6
0.000811826494125
4
0.0116814583344
5
0.00110279675703
6
7.60087126118e-05
6
0.00102845078604
5
0.0106170192023
('final', 0.45583252840222965)
```