README for Lab5

The folder lab5 contain 12 files/ directories:
kronrod.cpp, kronrod.h: C++ implementation for calculating Gauss-Kronrod node and corresponding weight from //www.alglib.net/integration/gausskronrodquadratures.php, which is programmed by John Burkard.
lab5.cpp: contain the implementation of using Gausss-Kronrod method to solve integration.
q12results.txt, q3_1.txt, q3_2.txt, q3_3.txt: contain the result of calculation form lab5.cpp.
lab5plot.m: which can plot the data from q12results.txt, q3_1.txt, q3_2.txt and q3_3.txt files.
Makefile: help to build the lab5.cpp into executable program.
result: The folder containing the result of plotting.
lab05_report.pdf: the writing part of the lab.
README.pdf: the documentation of the lab.

To run the code:
1. compile the lab5.cpp under linux system using makefile.
2. running the lab5.x generated by makefile.
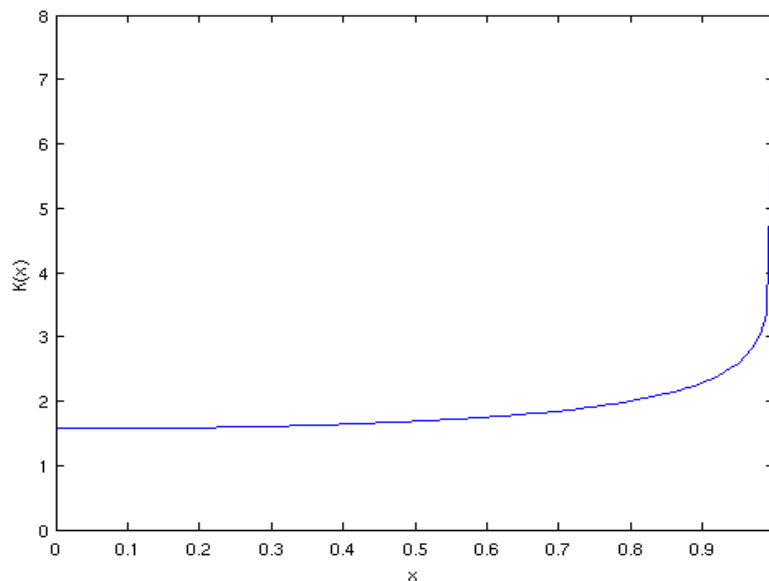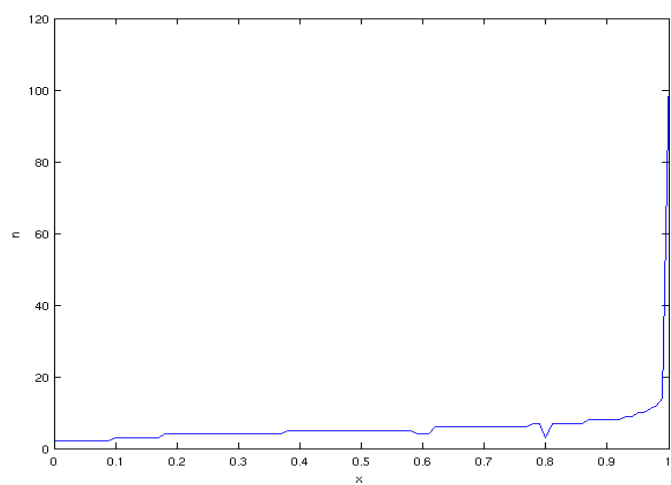3. using matlab to open and run lab5plot.m and generate the figures.
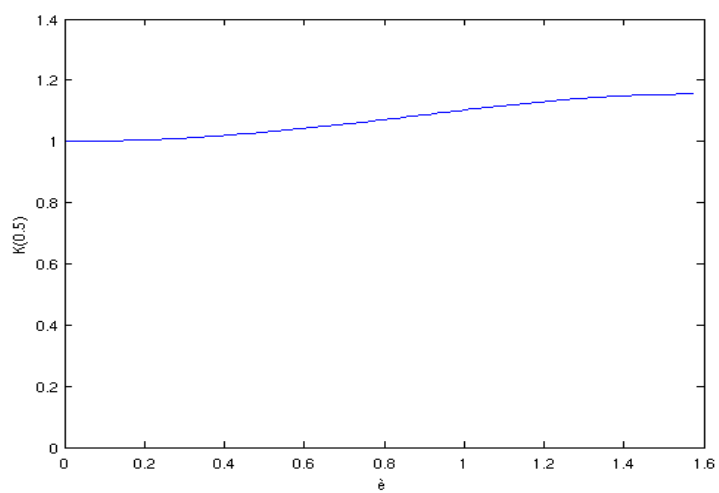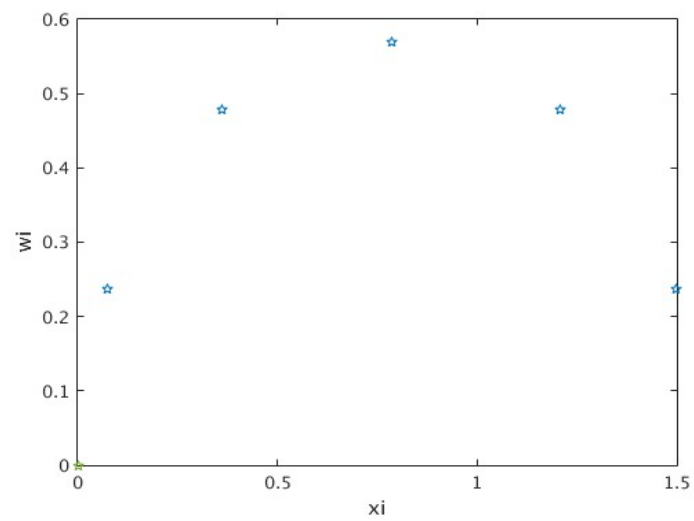

Results:
Figure 1:

Figure 2:

Figure 3:

Figure 4:

Figure 5