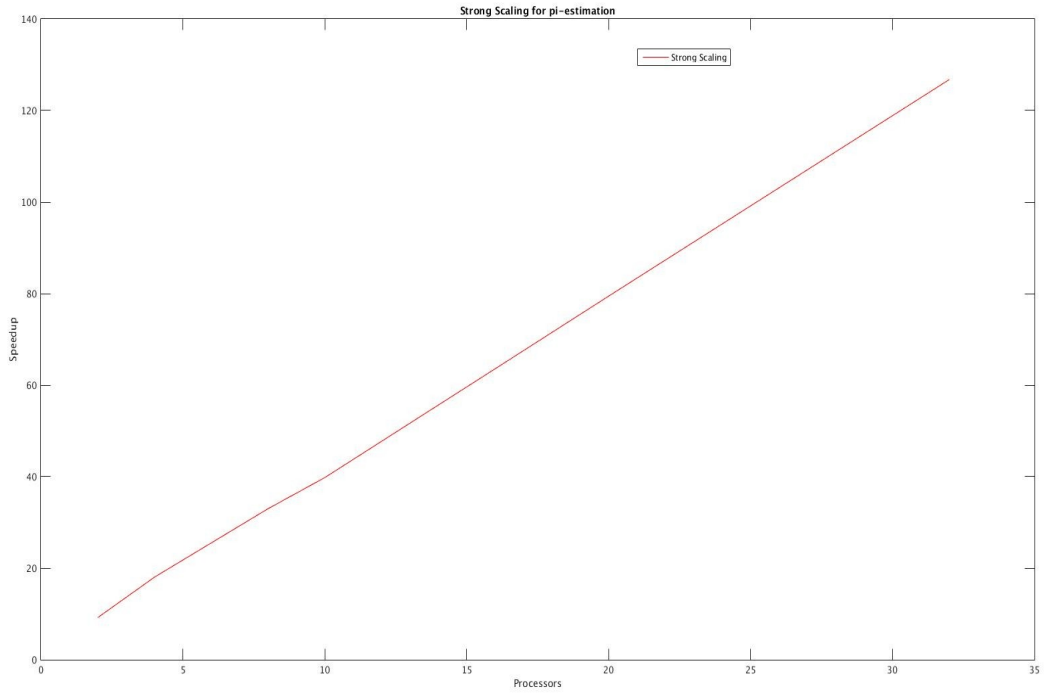
HPC – ASSIGNMENT 3

Question 1:

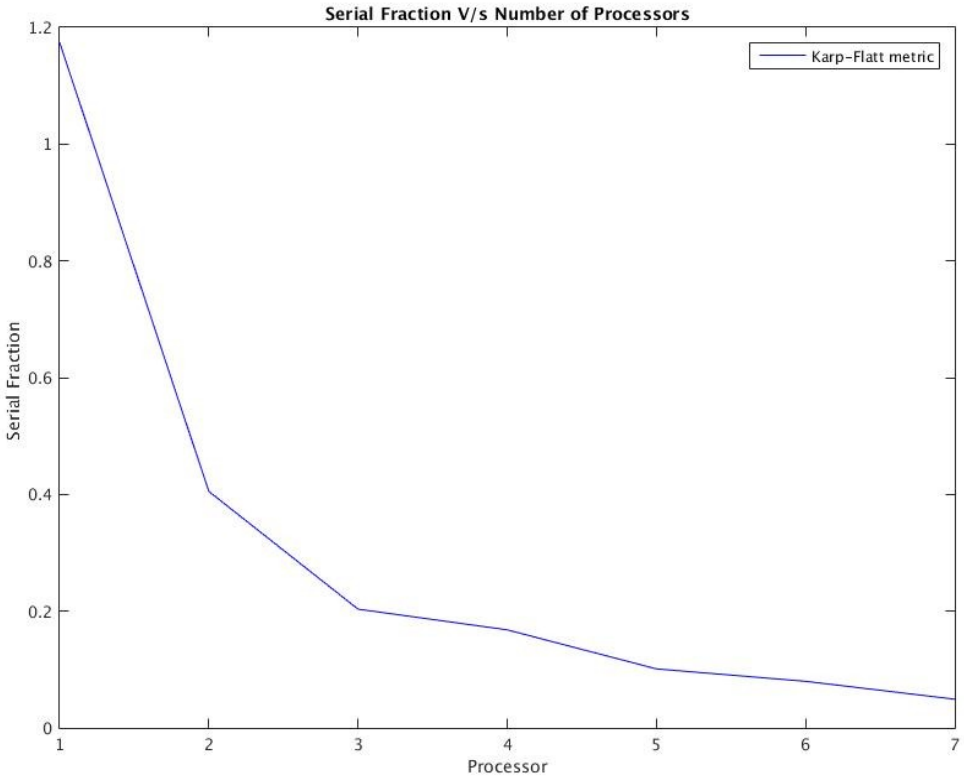
Calculation of PI using MPI

Strong Scaling: speedup V/s Processor

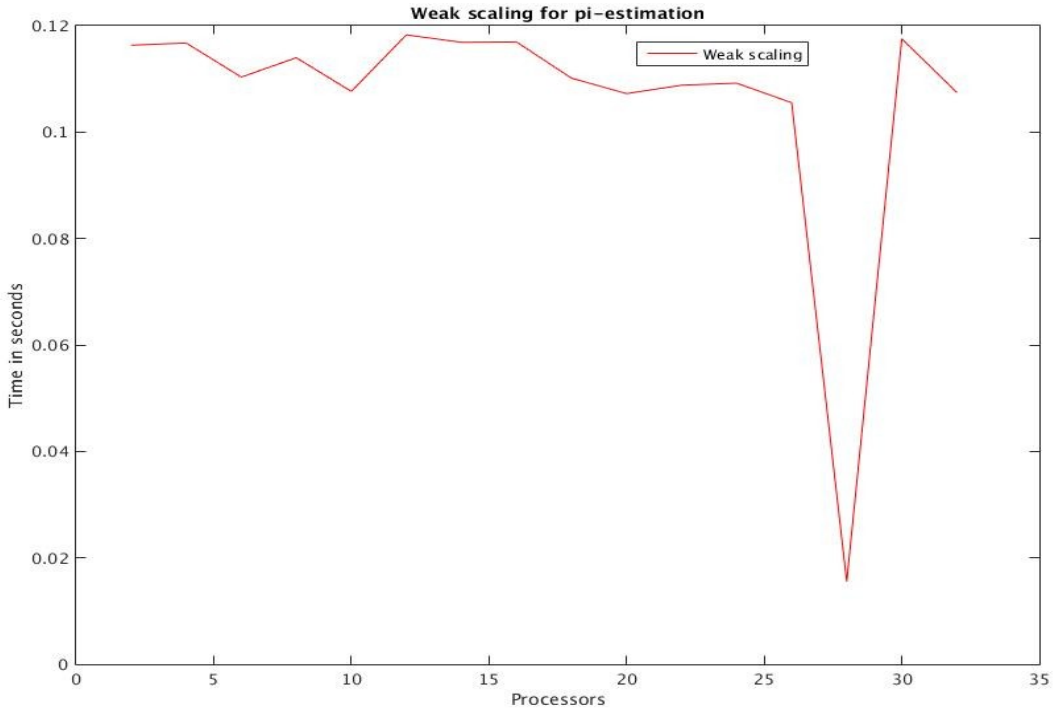
Number of points – 10e9



Serial Fraction of code by Karl- Flatt Metric



Weak Scaling



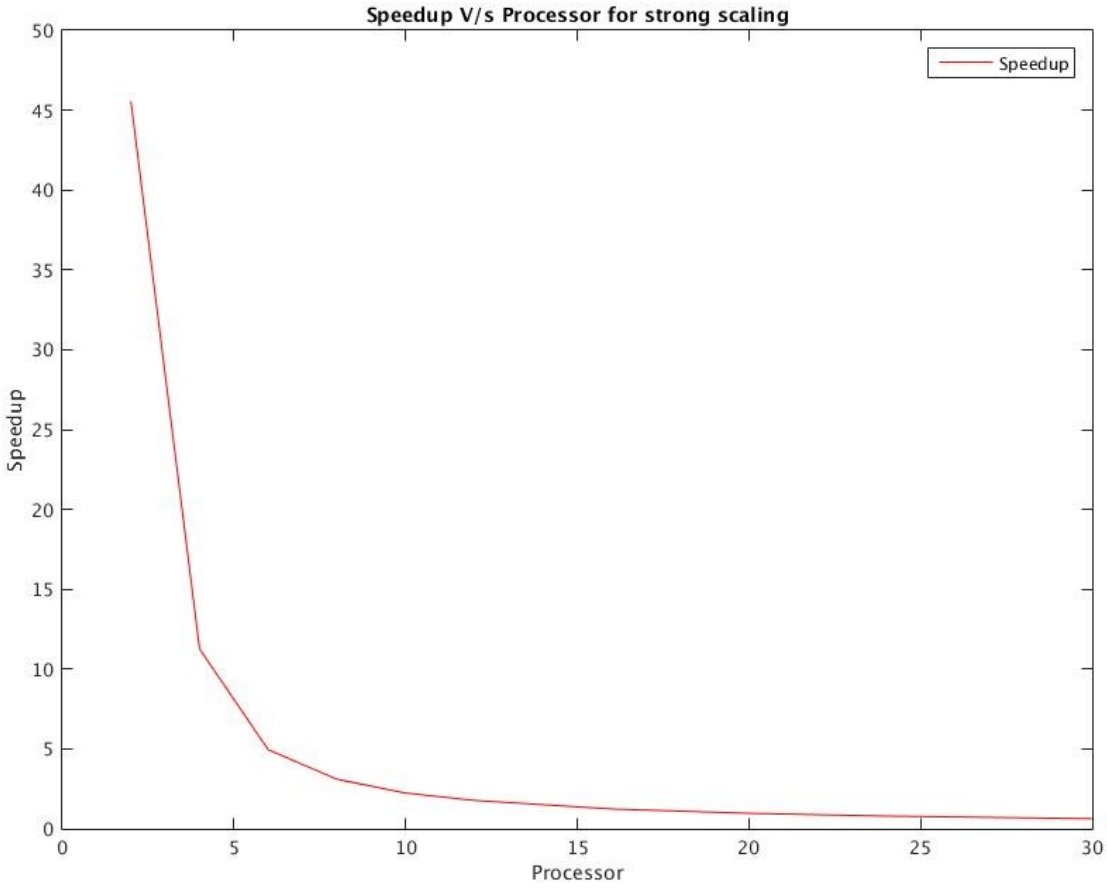
Question 2:

Calculation of Area of Mandelbrot set using MPI

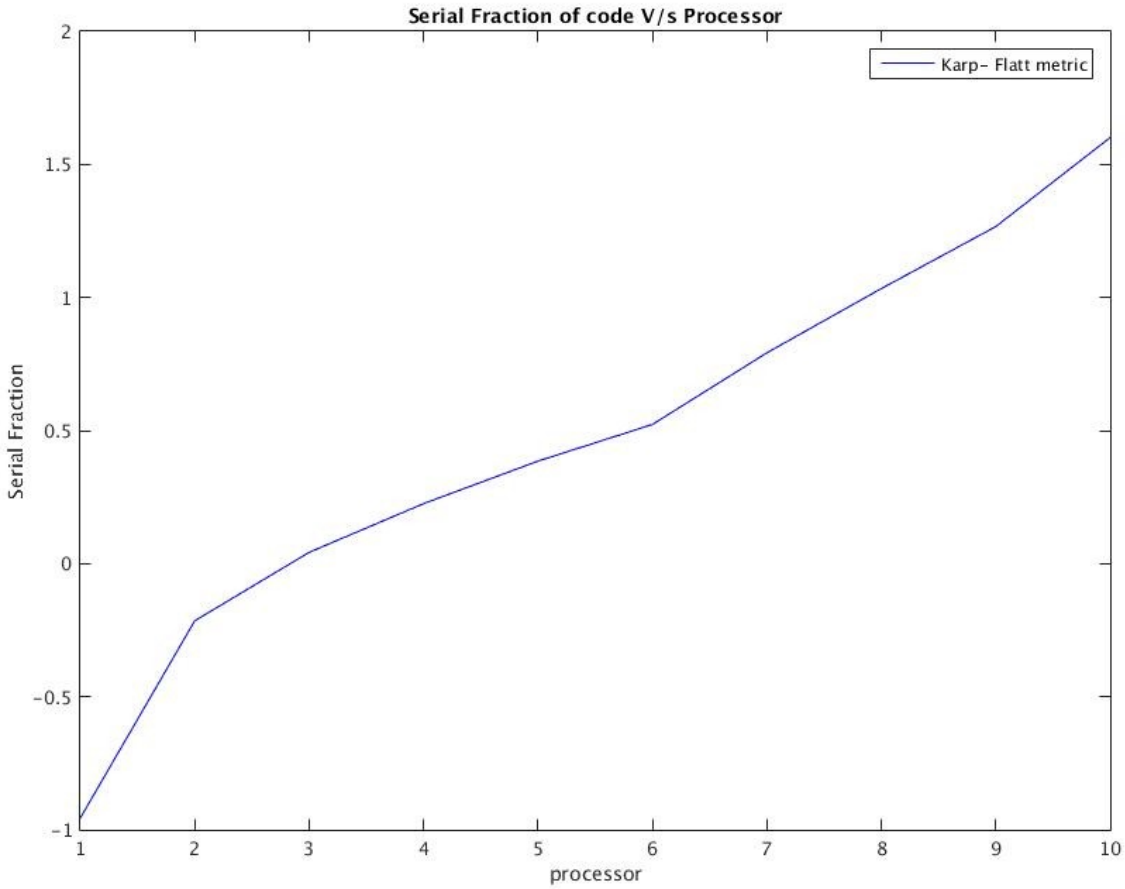
1.Dividing points equally among different processors

Strong Scaling: speedup V/s Processor

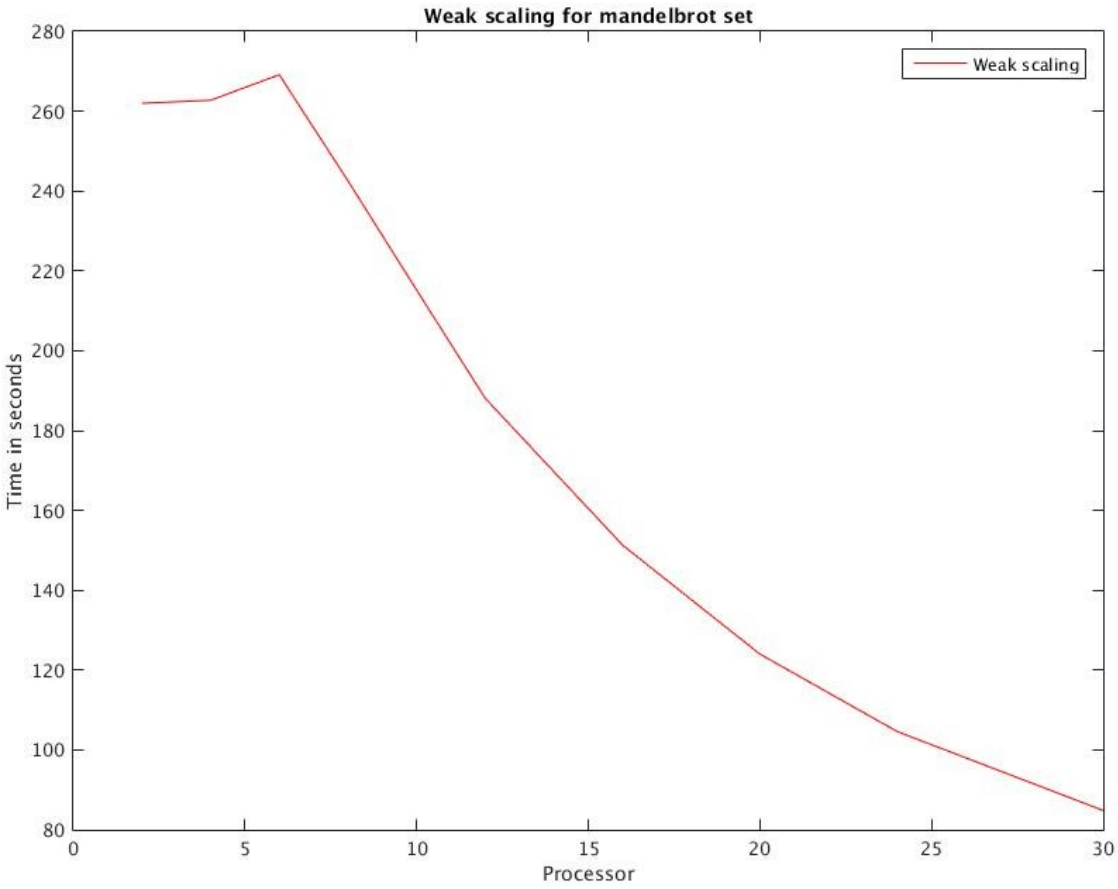
Number of points – 1200



Serial Fraction of code by Karl- Flatt Metric



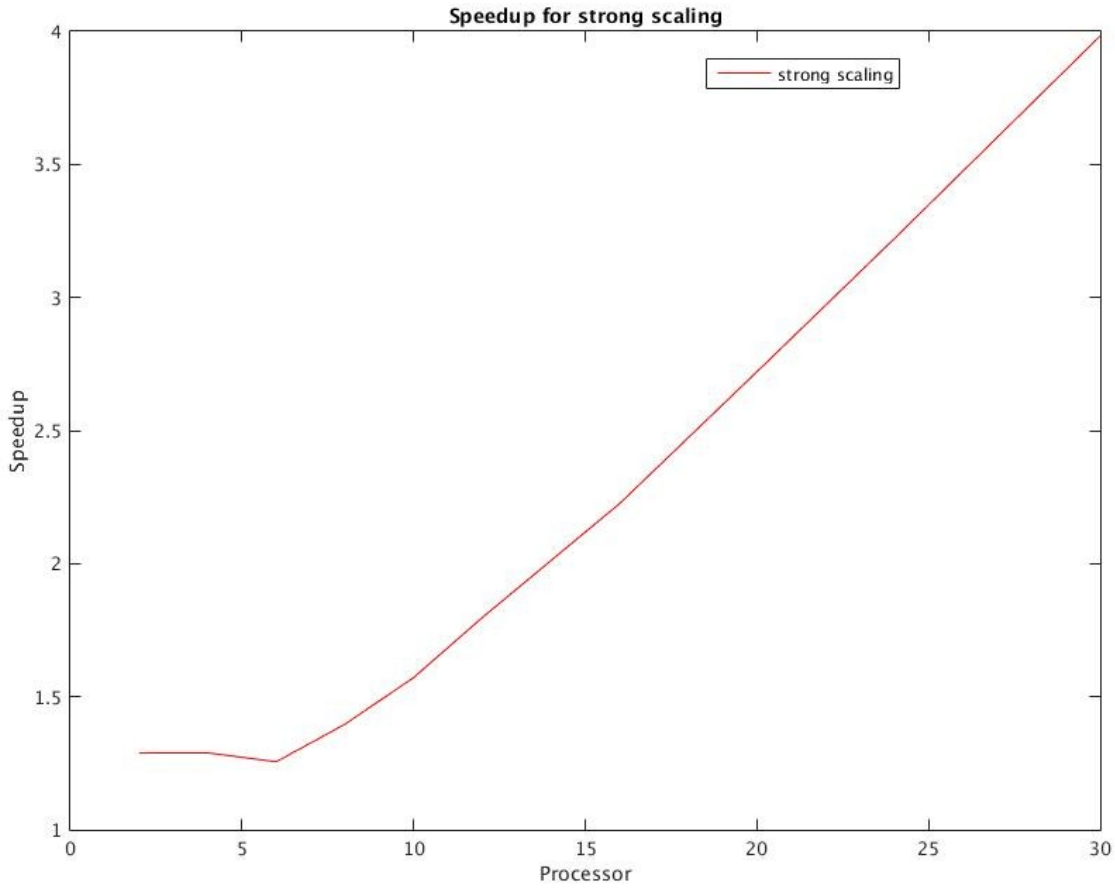
Weak Scaling



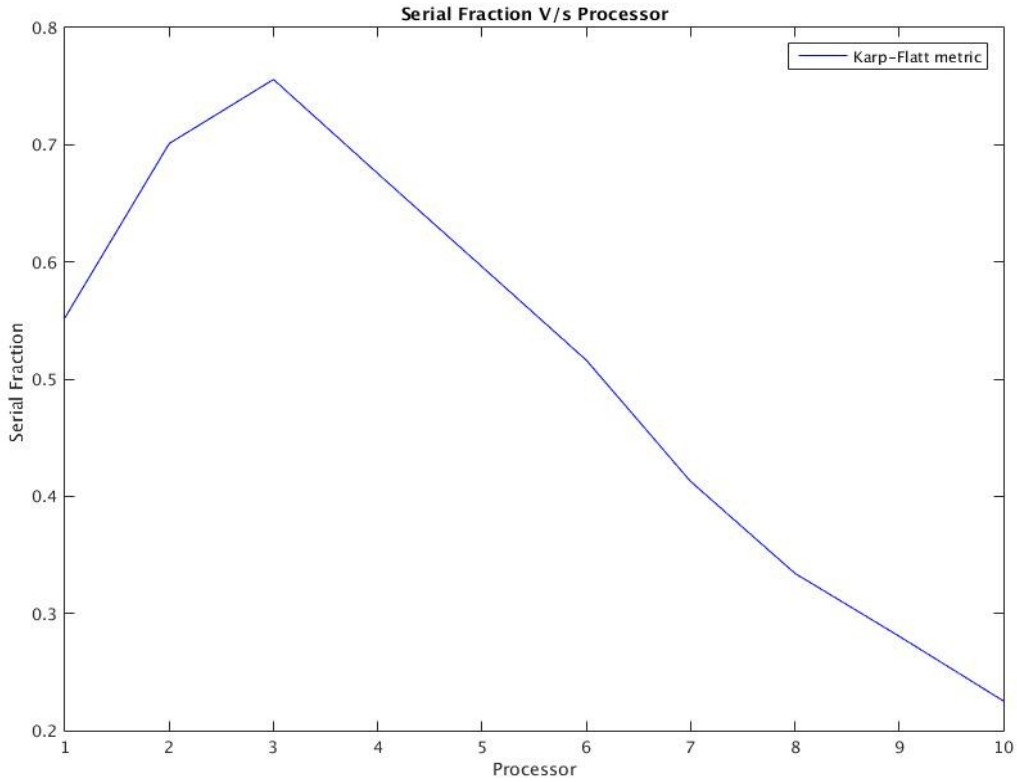
1. Splitting the grid in half and partitioning MPI_COMM_WORLD into Two Groups

Strong Scaling: speedup V/s Processor

Number of points – 1200



Serial Fraction of code by Karl- Flatt Metric



Weak Scaling