Calculate the number π using following formulas or other(any which you like):

$$\pi = 2\sqrt{3} \sum_{k=0}^{\infty} \frac{(-1)^k}{3^k (2k+1)}$$

$$\pi = \sum_{k=0}^{\infty} \frac{(-1)^k}{4^k} \left(\frac{2}{4k+1} + \frac{2}{4k+2} + \frac{1}{4k+3} \right)$$

Use mpi for different numbers of processors and compare the calculation time.

According to Amdahl's law find the ratio of serial calculations.