Long Nguyen

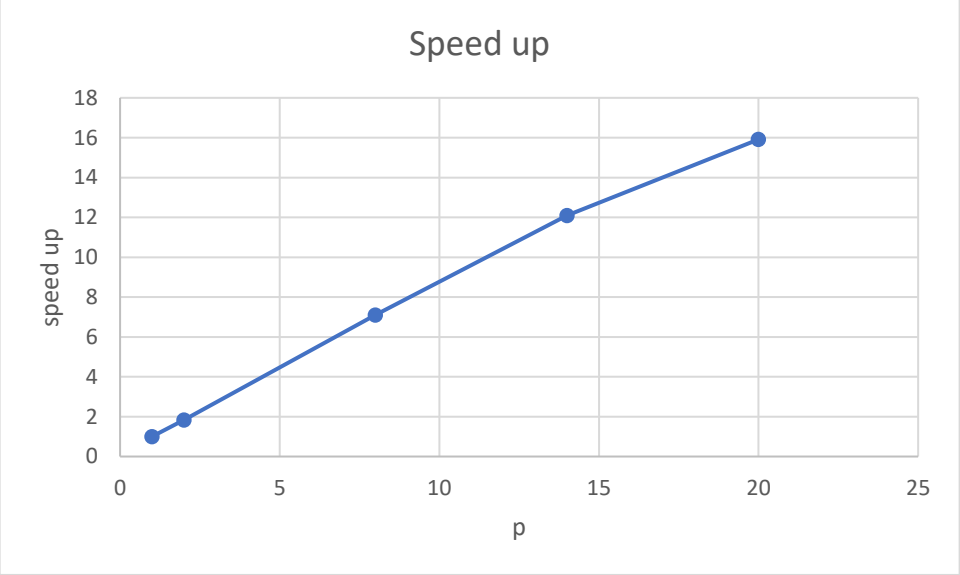
Trap Report

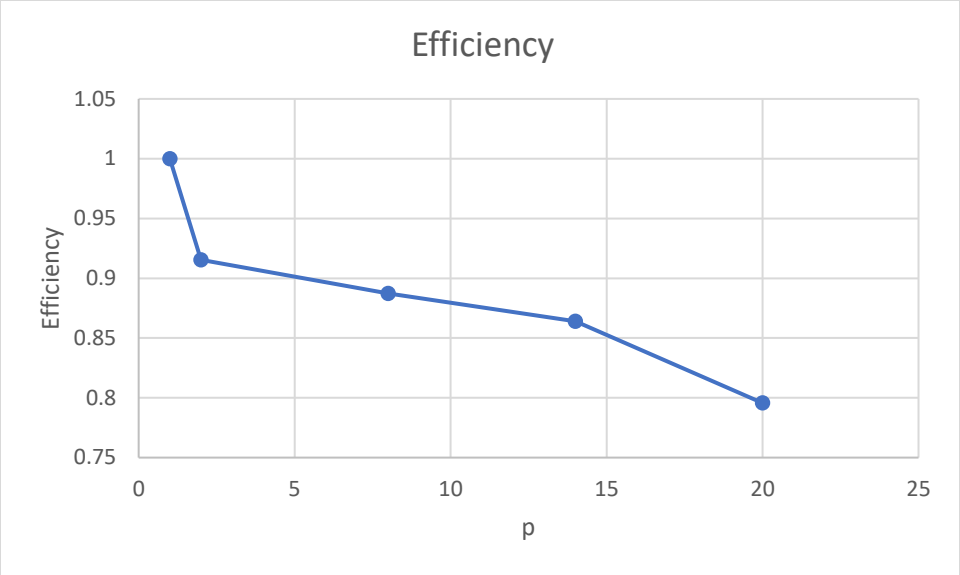
Value of n used: 43410500

ARTE: 4.97407795545927258 29e-15

# of core	run 1	run 2	run 3
1	**2.55E+01**	**2.37E+01**	2.52E+01
2	1.37E+01	1.29E+01	**1.30E+01**
8	3.45E+00	**3.34E+00**	3.61E+00
14	**1.96E+00**	2.06E+00	2.54E+00
20	1.69E+00	1.49E+00	**1.49E+00**

# of core	Total	estimated integral	Speed up	Efficiency
1	**2.37E+01**	4.75E+03	**1**	**1**
2	**1.30E+01**	4.75E+03	**1.830888031**	**0.915444015**
8	**3.34E+00**	4.75E+03	**7.098802395**	**0.887350299**
14	**1.96E+00**	4.75E+03	**12.09693878**	**0.864067055**
20	**1.49E+00**	4.75E+03	**15.91275168**	**0.795637584**





Conclusion:

The result is what we expected from putting a multiple core into a program that it will get faster, but the efficiency is reach until certain point. The tradeoff from speed up is accuracy. The more data you send out the bigger round off error you get since every single core losing small amount of data.