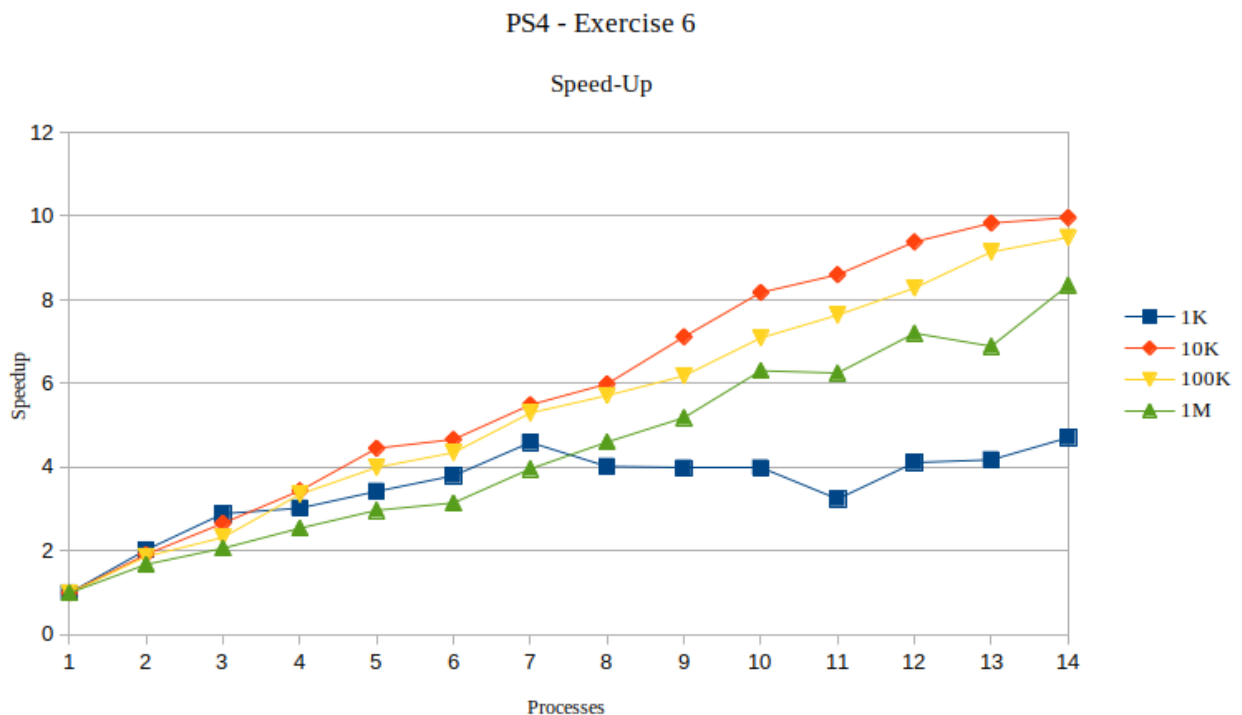# Exercise 6

Programming SS 2019 - Problem Set 4

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We are asked to check the speed-up for combinations of MPI processes and sample points using one node on *Alphacruncher*.

Speed-up in latency is calculated as follow:

$$S = \frac{t_{old}}{t_{new}}$$

In our case, t_{old} is the runtime with **one** thread.

Note1 : The exercise asks to try combination of MPI processes between 1 & 20. However, we noticed that jobs submitted with more that 14 processes would not start;

- status *PD* (pending) and node reason *Ressources*.

Note2: Execution outputs are stored in *Exercise6/output/*.