

# HW5

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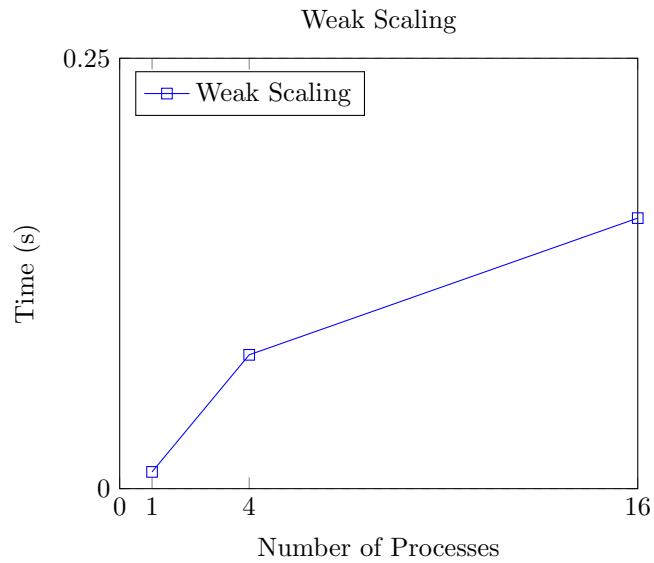
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## 1 MPI-parallel two-dimensional Jacobi smoother

See jacobi2d-mpi.cpp.

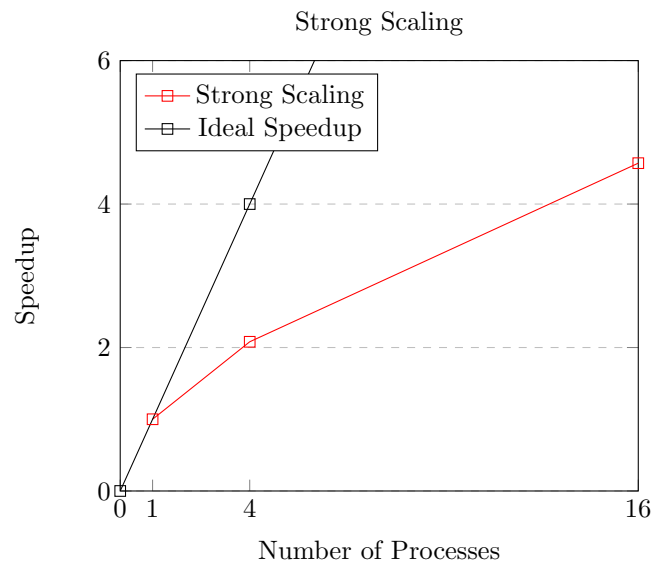
Weak scaling:  $N_t = 100$ , for 1000 iterations.

p	Time (s)
1	0.009742
4	0.077736
16	0.157146



Strong scaling:  $N = 1600$ , for 1000 iterations.

p	Time (s)	Speedup
1	5.630781	1
4	2.705367	2.08
16	1.232431	4.57



## 2 Parallel sample sort

See `ssort.cpp`.

$p = 64$

N	Time (s)
$10^4$	0.024693
$10^5$	0.047699
$10^6$	0.227989