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Concurrency HW4 Question 2

First one : $T_1 = 2048s$; $T_{inf} = 1s$
"Optimized" : $T_1' = 1024s$; $T_{inf}' = 8s$

So, one a $32 - p$ machine, we have for the first one $T_{32} = 2048/32 + 1 = 65s$ and for the "optimized" one $T_{32}' = 1024/32 + 8 = 40s$
So, as it's clearly faster on a $32 - p$ machine. This is why the students call the second one "optimized". This being said, on a $520 - p$ machine, we have $T_{512} = 2048/512 + 1 = 5s$ and $T_{512}' = 1024/512 + 8 = 10s$!
So, on a machine with a lot of processors, the "non otimized" one scale better thanks to his very small T_{inf}. Indeed, as the number of processor grows, the importance of T_1 become insignificant.