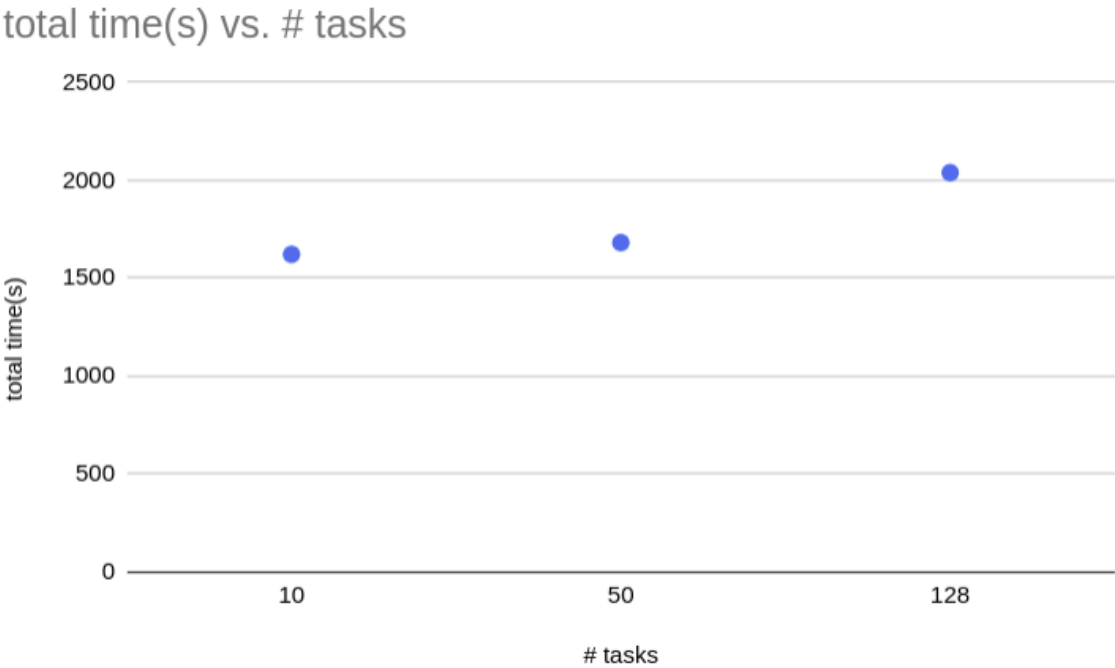


Why do tasks seem to run concurrently when there aren't enough cores to allow for concurrent execution? The figure below shows the results of running 10,50,128 tasks on **one** core on comet. The tasks were coded(on EnTK) to run concurrently. Each task “sleeps” for 100 seconds.



My expectation: with one core, I should only have 2 threads. Thus, I should only be able to run 2 tasks concurrently. The table below shows the results I expected and the results from the experiment.

The problem: the experimental results suggest that more than 2 tasks at a time were able to run concurrently.

let $TTX(i)$ denote the total time of execution for i tasks

	Experimental result	Expected result
$TTX(50) / TTX(10)$	1.03	5
$TTX(128) / TTX(10)$	1.25	12.8