

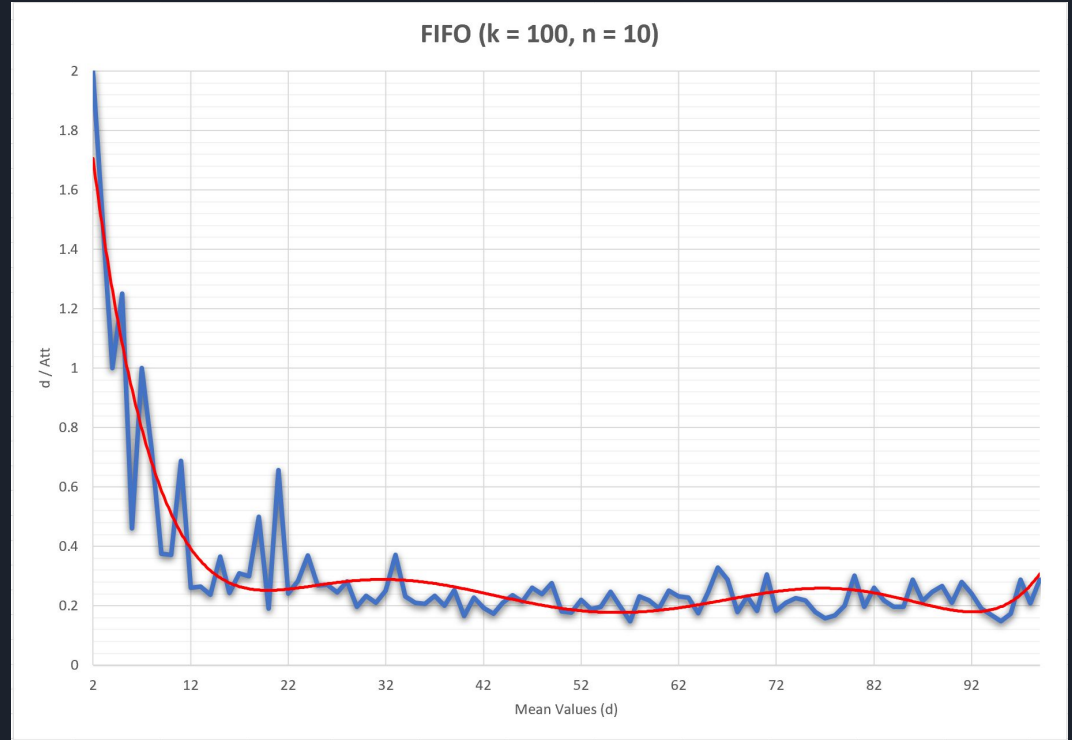


Scheduling Algorithm Comparison

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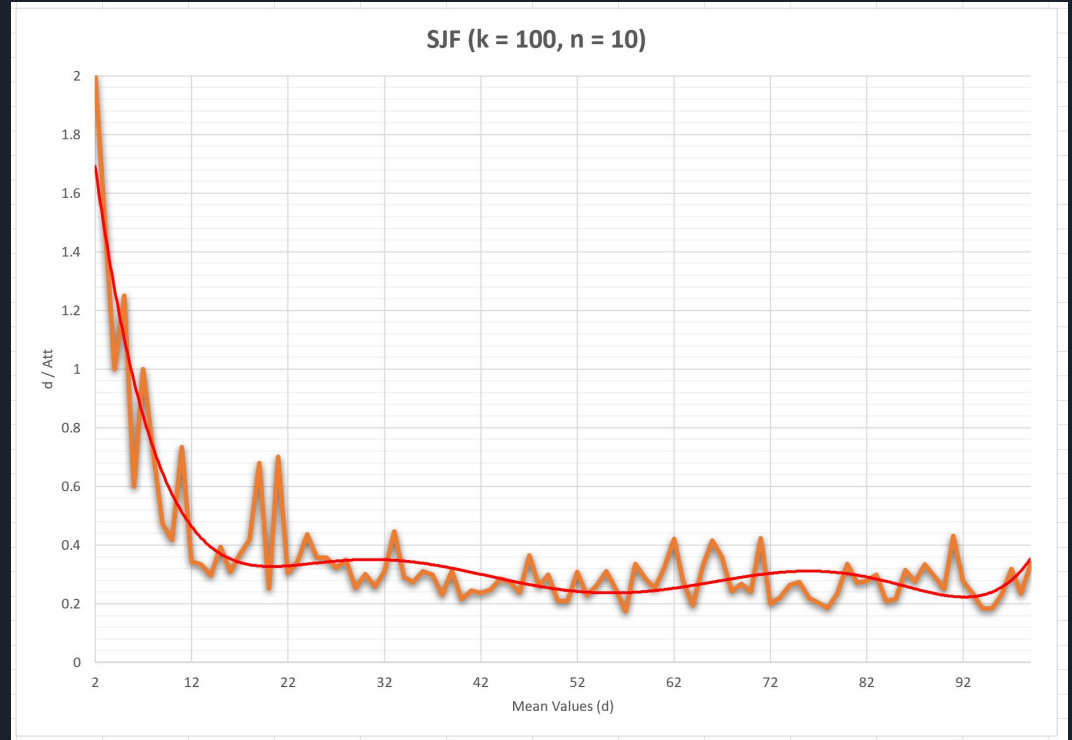
First In First Out (FIFO)

- Very basic
- Very fair



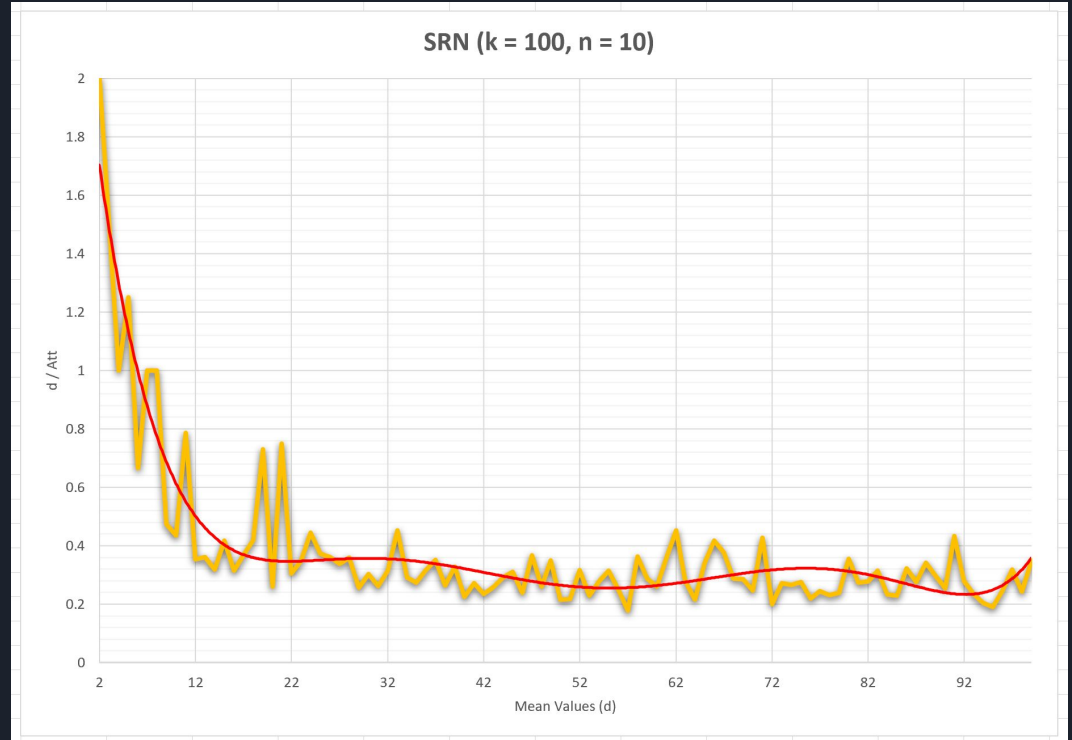
Shortest Job First (SJF)

- Time efficient
- Larger processes may starve
- Works well overall



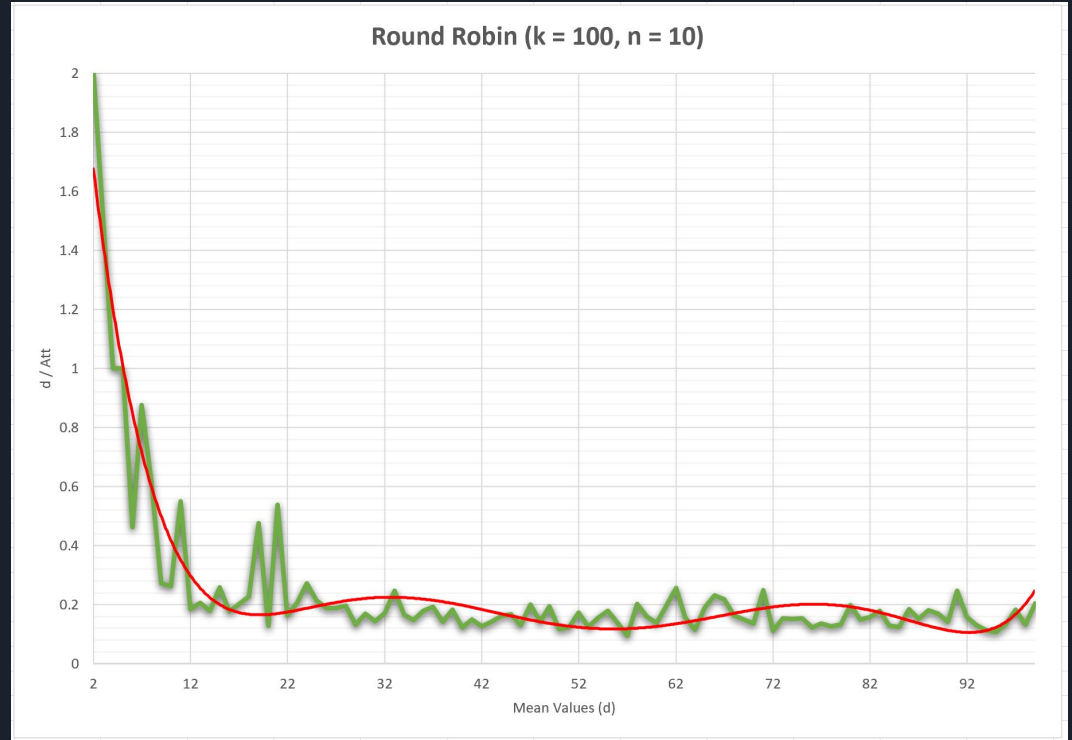
Shortest Remaining Next (SRN)

- Time efficient
- Larger processes may starve
- Works well overall



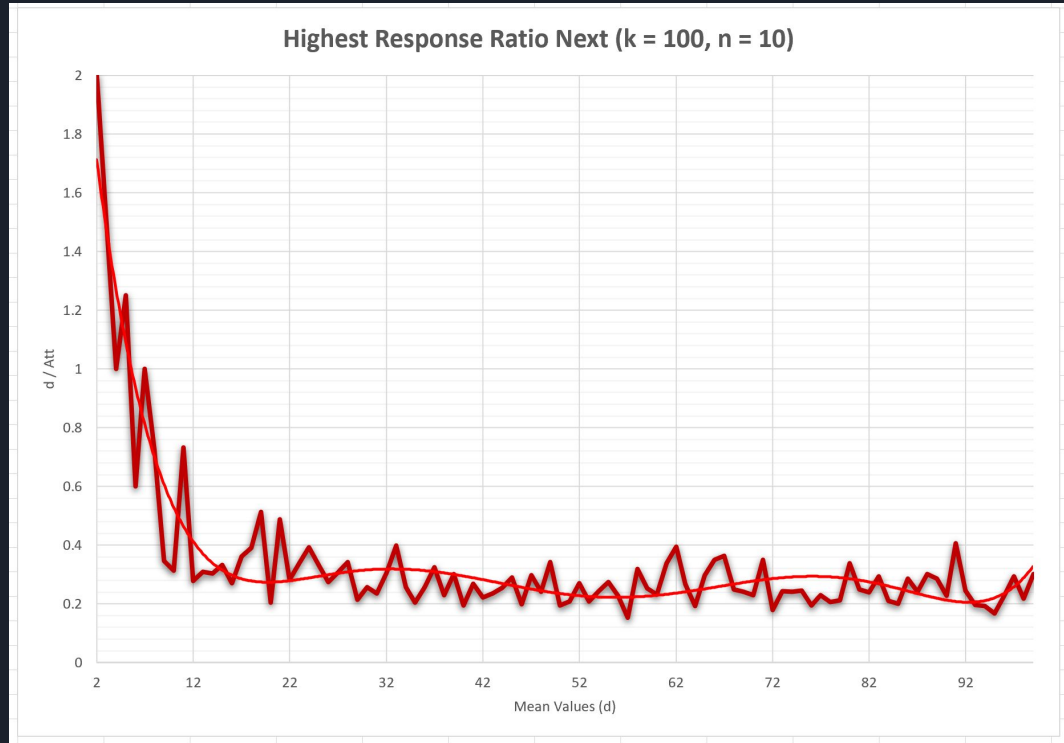
Round Robin (RR)

- No starvation
- Very fair
- Not efficient in certain applications



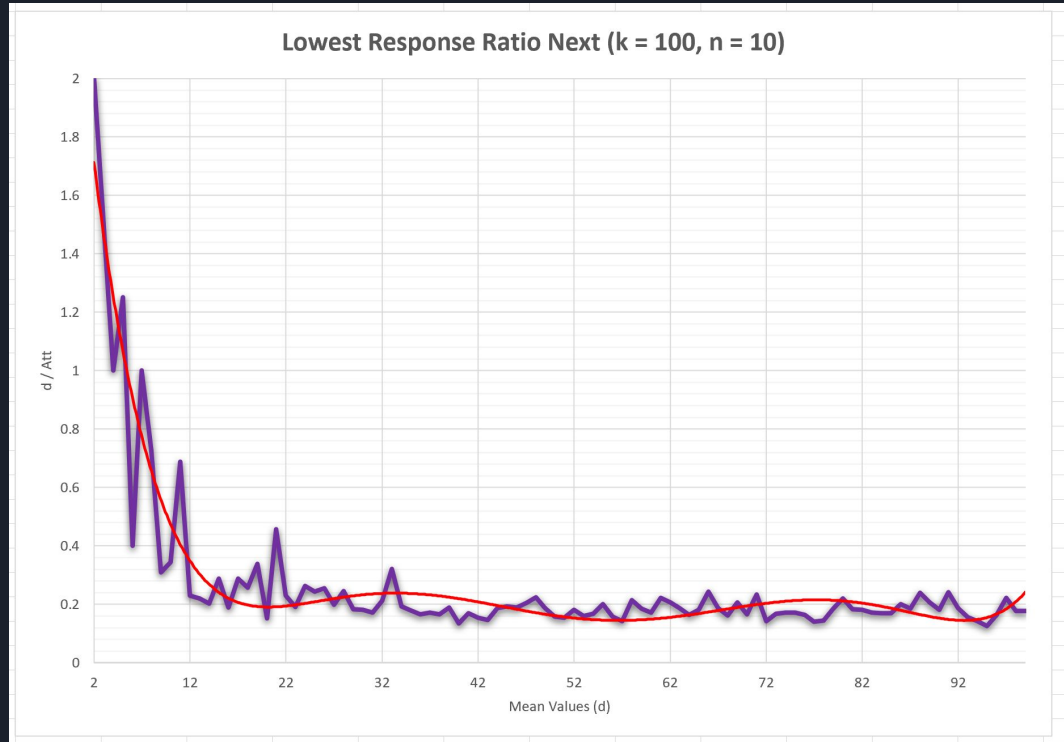
Highest Response Ratio Next (HRRN)

- The longer a process waits, it gets a better chance to run
- Moderately fair
- Strikes a good balance
- No Starvation



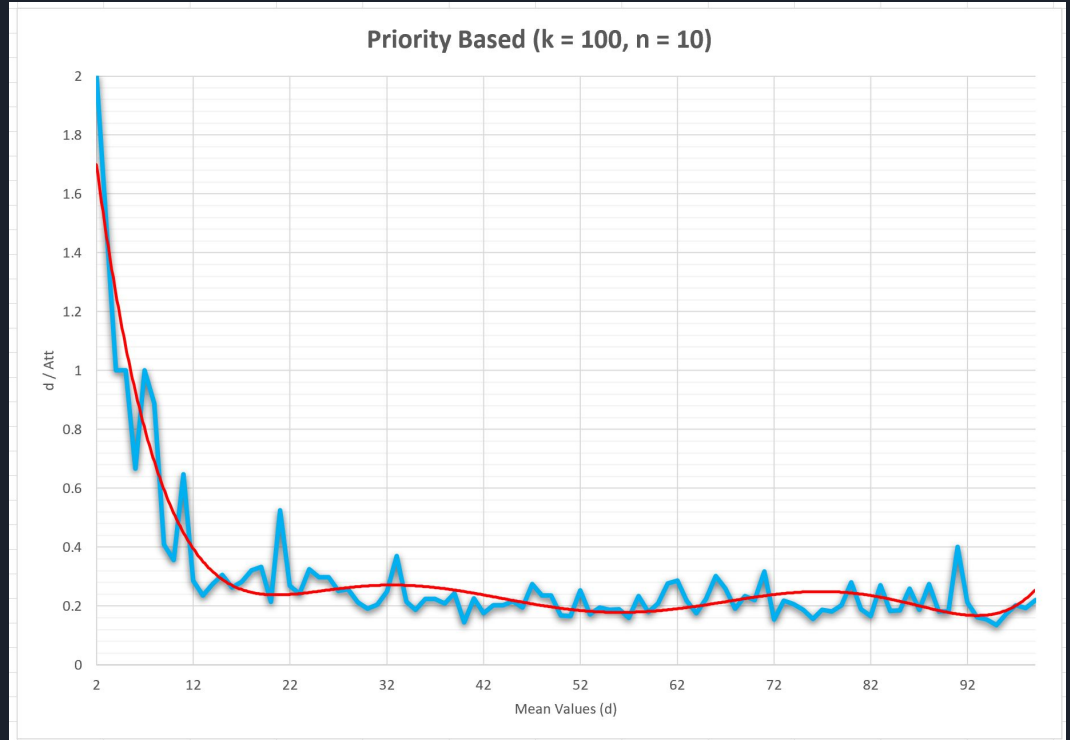
Lowest Response Ratio Next (LRRN)

- Opposite of HRRN
- The longer a process waits, the more it is punished
- Similar to a stack
- Very unfair
- Starvation almost certain



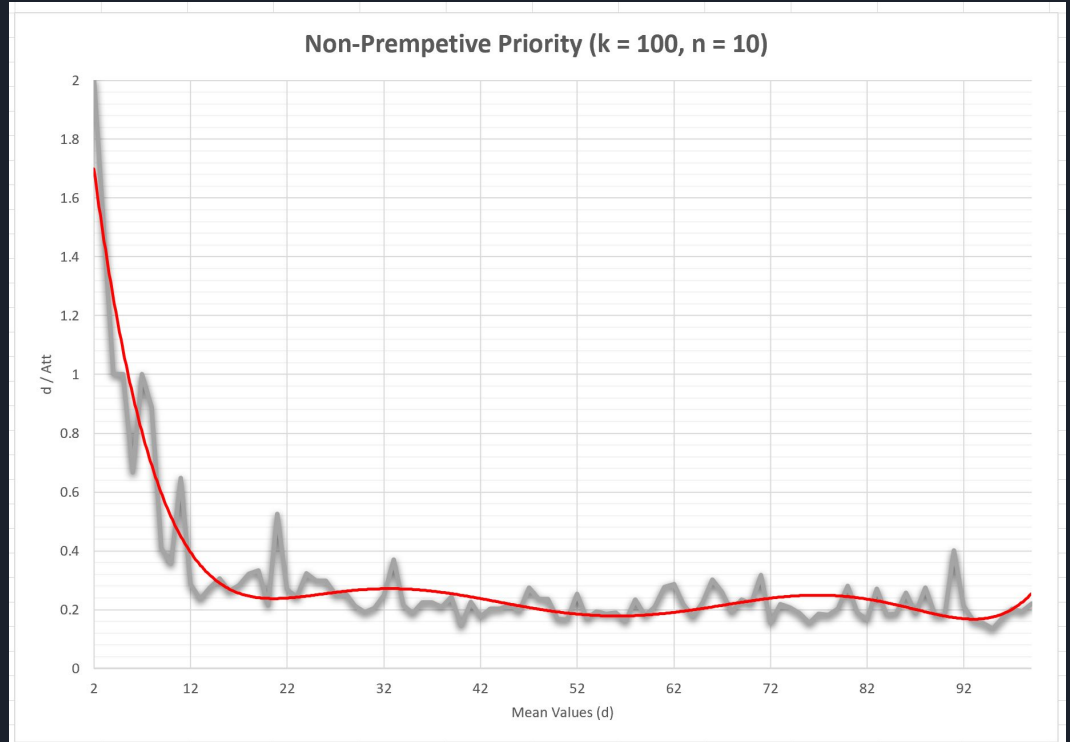
Priority Based (PB)

- Preemptive
- Performed approximately the same as FIFO
- Could be utilized better



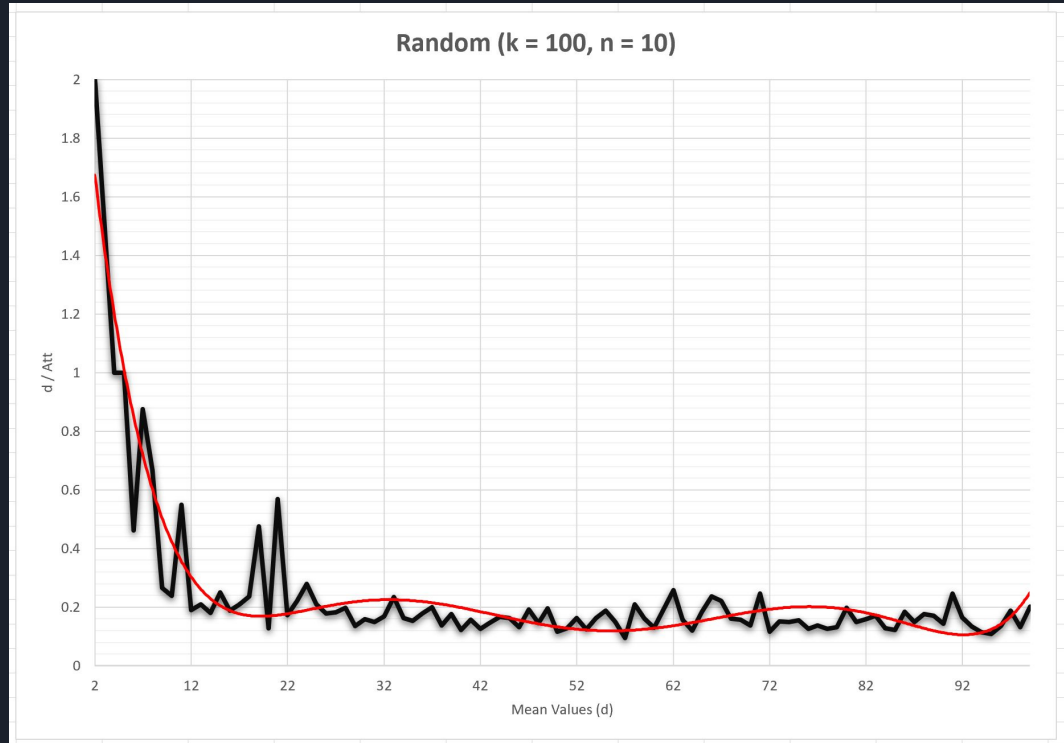
Non-Preemptive Priority (NPP)

- FIFO
- Could be useful if important processes shouldn't be interrupted.



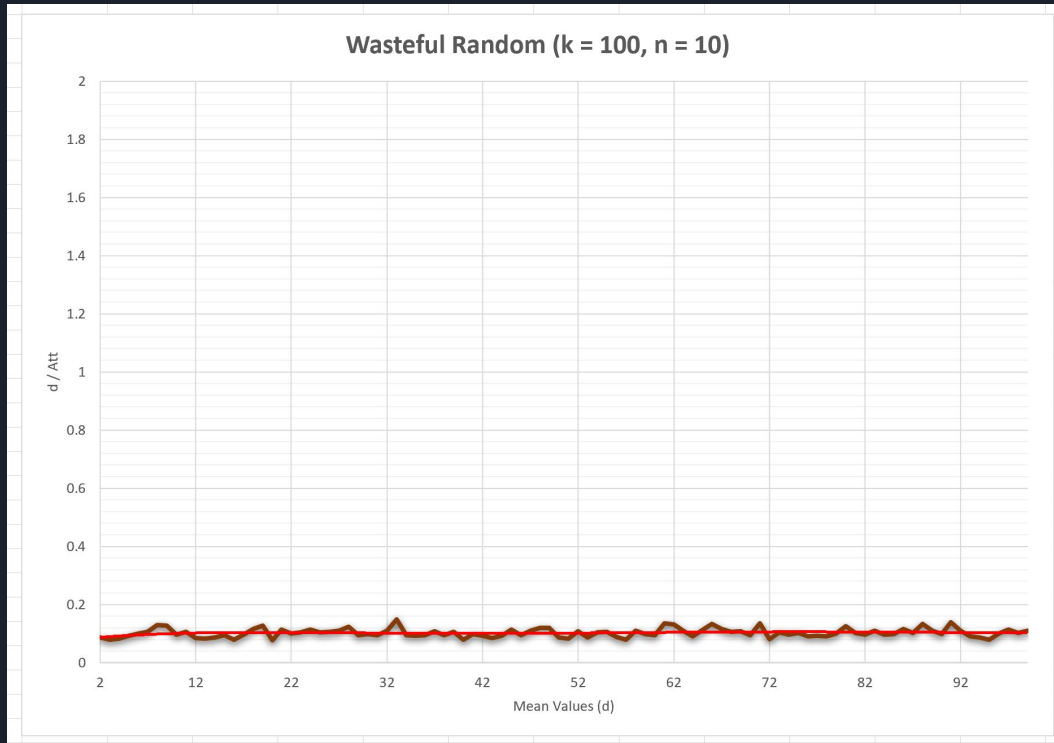
Random

- Good baseline
- If matched by other algorithm, other algorithm probably needs improvement for the objective

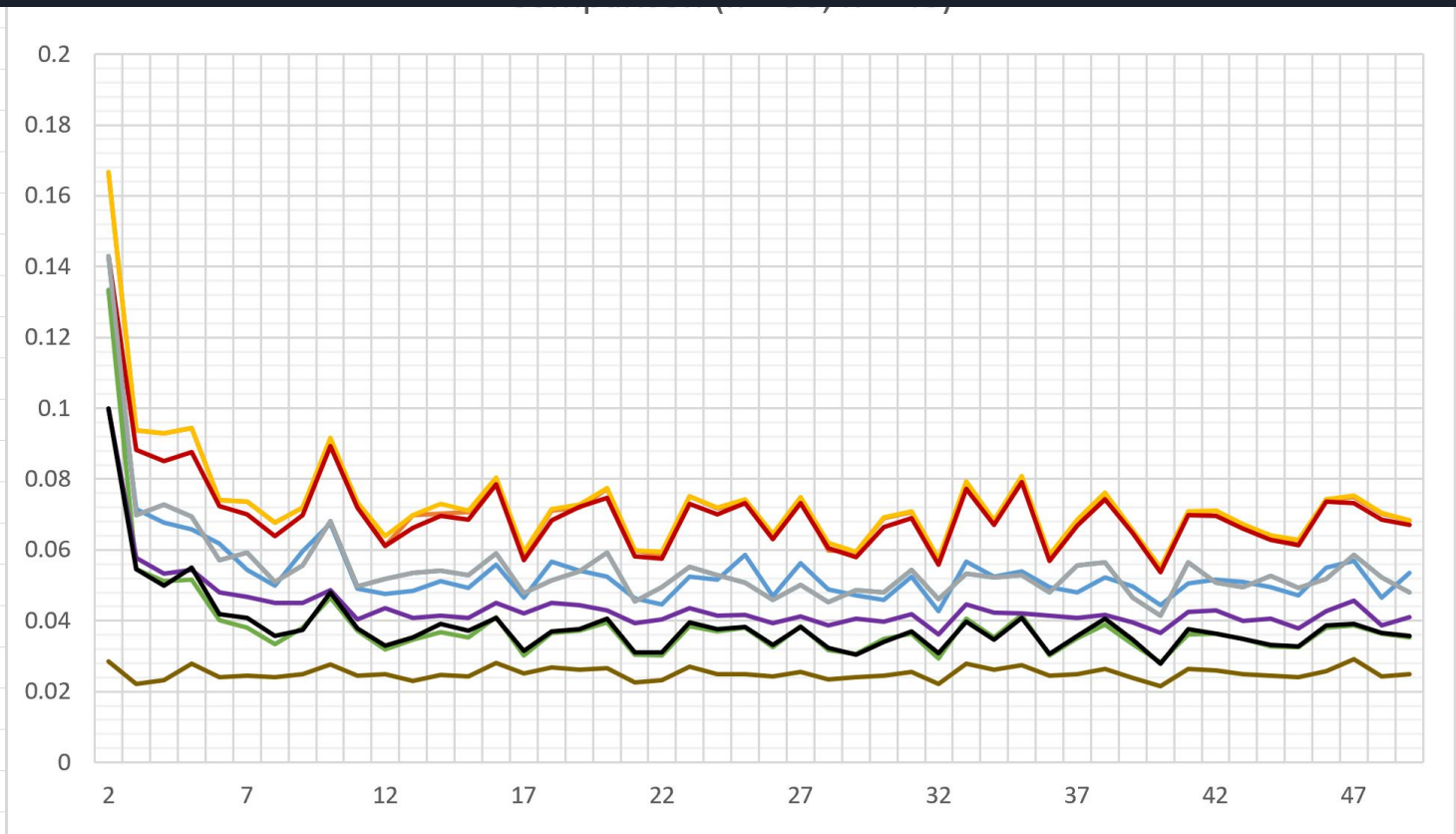


Wasteful Random

- Not efficient for any use
- Purposefully bad benchmark.



Comparison ($k = 50, n = 40$)





Sources

Shidali, G. A., et al. “A New Hybrid Process Scheduling Algorithm (Pre-Emptive Modified Highest Response Ratio Next).” *Computer Science and Engineering*, Scientific & Academic Publishing, article.sapub.org/10.5923.j.computer.20150501.01.html.