Unfortunately, I was not able to completely finish this milestone so I do not have any graphs to show, but I will hypothesis about was I expect to happen. I think if I had been able to implement it properly, testing the different values would have been able to show a linear trend with the runtime with each number tested.

Bottlenecks:
I think the bottlenecks would come when large amounts of memory are initialized with smaller amounts of memory requested from the system and smaller blocksizes. This happens because the larger blocksizes spend a lot more time splitting down to the smaller sizes. Another place bottlenecks could occur is when you add blocks back together.

Improvements:
For improvements I could've made, would have been to implement the buddy type with enum instead of using and integer. Also being able to coalesce the blocks. But for the overall function to implement, I think it would be ideal to have a function which allows you to allocate and free blocks from the smallest blocksize, so it does not have to constantly add the blocks back to eachother, it can just split them. This would probably decrease the runtime if implemented properly.