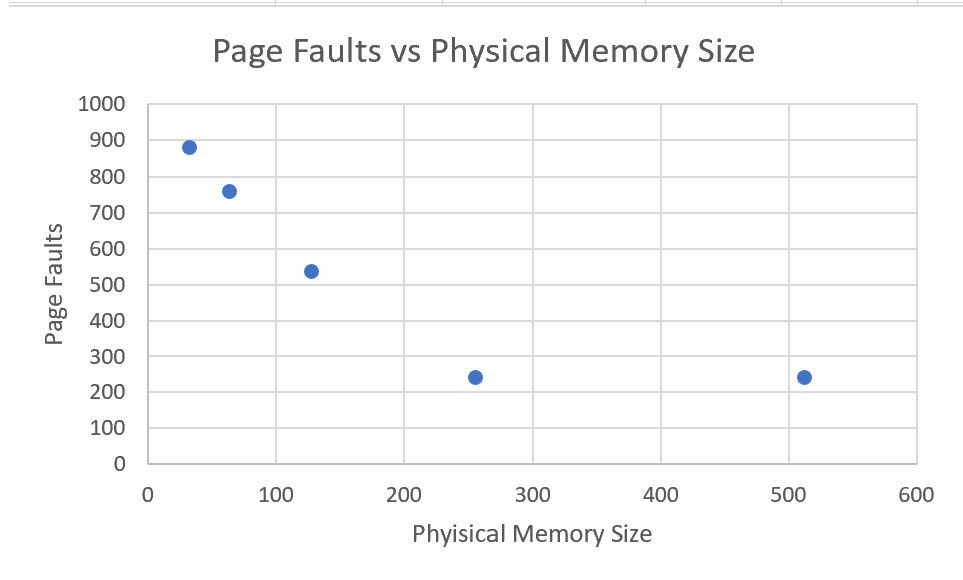


Physical Memory Size	Page Faults	Page Fault Rate			
32	881	0.881			
64	760	0.76			
128	538	0.538			
256	244	0.244			
512	244	0.244			



The above table contains the number of page faults when running the program for each listed physical memory size setting. In the experiment, all other settings remain the same, including the size of the virtual address space. As we can see, when setting the physical memory size to 32, the number of page faults is 881. Whenever we increase the size of physical memory, we expect the number of page faults to decrease (although Belady's Anomaly can occur because of the use of a FIFO algorithm, the page faults should still generally decrease). Furthermore, the decrease should be somewhat proportional to a $1/x^2$ function. In other words, as the physical memory size increases, the page faults will decrease, but there will be diminishing returns. When we increase the physical memory size to 64, the page faults decrease to 760, and then 538 page faults for a size of 128, and 244 page faults for a size of 256. These results are consistent with our predictions, because the page faults are decreasing at a non-linear rate. However, when increasing the physical memory size to 512, the page faults do not decrease, instead remaining at 244. The reason for this is that only the physical memory size is being set to 512; the virtual address space and page table size remain the same. Thus, increasing the memory size beyond 256 bits would not cause any decreases in page faults.