



2. The graph shows runtime of the program as a function of the buffer size. The graph isn't a straight line since a larger buffer size leads to fewer system calls which take a lot of time.

3. Yes. Printing to the screen is a system call, we will call $\sim 5\text{MB}/\text{buff}$ times to system calls which will slow down the program.

1. False: Printing to screen is a system call.

2. False Interrupt, not system call.

3. False: The other way around.

4. False: Applications are able to access devices in order to communicate with the OS kernel.

5. False: Web browsers run in user-mode. Users can install programs that run in kernel-mode.

6. False: The OS can choose to ignore interrupt signals but not prevent them from accessing the CPU.

7. False: The VM runs on software, which is not faster than the actual hardware.

8. False: An app can access CD ROM through OS system calls in user-mode.

9. False: system calls which cause the kernel to make a context switch which slows down programs.

10. False: External devices don't communicate with the OS but rather with the CPU.