6. On a specific architecture, each physical memory access time costs 20 ns. Suppose a TLB access requires 3 ns and has a miss rate of 0.03. If the MMU is capable of accessing a 3-level page table with negligible overhead other than the memory access times, what is the effective access time? Show your steps.

Effective Access Time = TLB + Ma + (Miss * pageTableWalk)

TLB = 3ns

MA = 20ns

Miss = .03

PageTableWalk = NumLevels · Ma = 3·20 = 60

Plug in

3 + 20 + (.03 * 60) = **24.8ns**