1) The one that you cannot pipeline is sum because you can't increment sum till $v[i]$ and $v[i]$ have been multiplied together; sum depends on something else in order to be incremented which is why it cannot be pipelined. You also cannot pipeline the loop condition since each loop is dependent on whether the condition after incrementing passes.

2) The Best case CPE would be around 3 clock cycles since the float addition is the bottleneck in our function so the slowest latency can't be pipelined. Reason why it's not 5 or 1 is because multiplication can be pipelined but not addition.

d. Array: 7
Inner(): 5   inner 2(): 4
Array: 100
Inner(): 4   Inner 2(): 3
Array: 1000
Inner(): 17   Inner 2(): 9

Array: 20,000
Inner() 233   Inner 2() 136
Array: 50,000
Inner(): 619   Inner 2(): 317

Array time graph