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Solution Doc

Question 2

a) The addition operation (sum +=) where we add our product from u[i] * v[i] to our temporary registier, sum. The reason this operation cannot be parallelized is because it requires the previous value in sum in order to perform the += operation.

b) As it is currently written, the best-case CPE four our function is 5. This is because our functions longest CPE is a floating point multiplication. Float multiplication latency is 5, so that is our best case CPE.

c) code project

d) the function inner2() is faster. The function call speed can be seen in this graph: