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course: CMPS4563

instructor: Dr. Eduardo Colmenares

**a. Sequential**

The summation of all numbers is: 204800320000

Elapsed time = 0.8611679 milliseconds.

**b. Parallel (MPI\_Send and MPI\_Recv)**

The summation of all numbers is: 204800320000

Elapsed time = 410.4960 milliseconds.

**c. Parallel (MPI\_Scatter and MPI\_Reduce)**

The summation of all numbers is: 204800320000

Elapsed time = 7.559061 milliseconds.