COMP 322: Fundamentals of Parallel Programming (Spring 2014)
Instructor: Vivek Sarkar
Worksheet 4: due at end of class today

Name: _____   **Netid: _____**

Array Sum Speedup

- Estimate $T(S,P) \sim WORK(G,S)/P + CPL(G,S) = (S-1)/P + \log 2(S)$ for a parallel array sum computation
- Assume $S = 1024 \Longrightarrow \log 2(S) = 10$
- Compute for 10, 100, 1000 processors
     $T(P) = 1023/P + 10$
     $Speedup(10) = T(1)/T(10) =$
     $Speedup(100) = T(1)/T(100) =$
     $Speedup(1000) = T(1)/T(1000) =$
- Why is the speedup sub-linear?