Worksheet #9: Analysis of Map Reduce Example

Name: _____ Net ID: _____

Analyze the total WORK and CPL for the Map-Reduce example in slide 16, under the following assumptions:

- Assume that each Map step has WORK = number of in words, and CPL=1
  - For example, WORK=3 and CPL=1 for Map 1
- Assume that each Reduce step has WORK = number of word-count pairs, and CPL = $\log_2$(number of occurrences for in word with largest count)
  - For example, WORK=5 for Reduce 1, and CPL = log2(4) = 2
- Assume that the distribute, shuffle, and collect operations are free.