

Worksheet #8: Analysis of Map Reduce Example

Name: _____

Net ID: _____

Analyze the total WORK and CPL for the Map-Reduce example in slide 21, under the following assumptions:

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

