Problem Set #1 (Algorithms)

Department: _____

Student ID: _____

Student Name: _____

1. Consider the MERGE procedure on an input of n numbers. For simplicity, assume that n is a power of 2. For the best case, analyze the time complexity of the MERGE procedure in Θ-notation mathematically. And, explain your analysis.

2. Consider the MERGE-SORT procedure on an input of n numbers. For simplicity, assume that n is a power of 2. For the best case, analyze the time complexity of the MERGE-SORT procedure in Θ-notation mathematically. And, explain your analysis.