

CSCE 500 Homework Assignment #1

September 15, 2021

Work on the following exercise problems:

- (1) **2.3-3** (on pp. 39)
- (2) **2.3-6** (on pp. 39)
- (3) **4.3-3** (on pp. 87)
- (4) **4.4-9** (on pp. 93)
- (5) **4-1f** (on pp. 107)
- (6) **4-3f** (on pp. 108)
- (7) Use the substitution method to solve
$$T(n) = T(n/3) + T(2n/3) + cn$$
- (8) Use the recursion-tree method to solve
 1. $T(n) = T(\lfloor n/2 \rfloor) + T(\lceil n/2 \rceil) + c$
 2. $T(n) = 2T(n/2) + cn(\lg n)$
 2. $T(n) = T(n/3) + T(2n/3) + n(\lg n)$

Due in Class on September 22, 2021