## CSC 212: Data Structures and Abstractions Spring 2018 University of Rhode Island

## Weekly Problem Set #12

Due Thursday 4/26 before class. Please turn in neat, and organized, answers hand-written on standard-sized paper without any fringe. At the top of each sheet you hand in, please write your name, and ID. The only library you're allowed to use in your answers is iostream.

## 1 2-3 Trees

- 1. Draw a 2-3 tree after the following operations steps:
  - (a) Insert: [10, 5, 12, 8, 19, 6, 2, 11, 15, 9, 7]
  - (b) Remove: [7, 12, 8, 10, 9]
- 2. Write a search algorithm for a 2-3 tree.
- 3. Explain the tradeoffs between binary search trees, and 2-3 trees. Justify your answer, citing specific examples where you would use either type of tree.