

Algorithms

Problem Set 4

University of Virginia

Gabriel Robins

Please make all algorithms as efficient as you can, and state their time and space complexities.

1-73. Solve the following problems from the [Cormen, Third Edition, 2009] algorithms textbook:

p. 700: 25.2-6, 25.2-8

p. 1020-1021: 33.1-4, 33.1-6, 33.1-7, 33.1-8

p. 1028: 33.2-1, 33.2-4, 33.2-5, 33.2-6, 33.2-7

p. 1038-1039: 33.3-2, 33.3-3, 33.3-4, 33.3-5, 33.3-6

p. 1044-1045: 33-1, 33-3, 33-4

p. 1061: 34.1-5, 34.1-6

p. 1065-1066: 34.2-1, 34.2-2, 34.2-4, 34.2-5, 34.2-7, 34.2-8, 34.2-9, 34.2-10

p. 1077-1078: 34.3-2, 34.3-3, 34.3-6, 34.3-7

p. 1086: 34.4-4, 34.4-5, 34.4-6, 34.4-7

p. 1100-1101: 34.5-1, 34.5-4, 34.5-7, 34.5-8

p. 1111: 35.1-1, 35.1-3, 35.1-4, 35.1-5

p. 1116: 35.2-2, 35.2-3, 35.2-4, 35.2-5

p. 1134: 35.5-5

p. 1137: 35-6

p. 1156: A.2-1, A.2-3, A-1

p. 1162-1163: B.1-2, B.1-3, B.1-5

p. 1165: B.2-1, B.2-3

p. 1168: B.3-1

p. 1172-1173: B.4-1, B.4-2, B.4-4

p. 1180-1182: B.5-4, B.5-7, B-1, B-2, B-3

p. 1187-1188: C.1-1, C.1-2, C.1-9

p. 1195-1196: C.2-9

p. 1201: C.3-8