

## Practice questions from the book

This refers to the 2nd edition of CLRS. Page and exercise numbers in parentheses ( ) refer to the 3rd edition of CLRS. Exercises in brackets [ ] refer to harder exercises.

- Analyzing Algorithms:
  - page 21 (22): 2.1-3,4
  - page 27 (29): all exercises
  - page 36 (39): 2.3-3,4,5,6
  - page 37 (39): 2-1,2,3
- Asymptotic Notation:
  - page 50 (52): 3.1-1 - 3.1-6
  - page 58 (61): 3-2,3,4
- Recurrences:
  - page 67: 4.1-1,2,3,5 (page 87: 4.3-1,2,3,4,6,7,8)
  - page 72: 4.2-1,2,3,4, [4.2-5] (page 92: 4.4-1,2,3,4,5,6,7, [4.4-8,9])
  - page 75: 4.3-1,2,3 (page 96: 4.5-1,2,3)
  - page 85 (107): 4-1,3,4, [4-2]
  - page 741: 28.2-3,4,5,6 (page 82: 4.2-4,5,6,7)
- Probability and Randomized Algorithms:
  - page 1105: C.2-2, [C.2-3] (page 2294: C.2-1, [C.2-3])
  - page 1110 (1200): C.3-1,2,3,4
  - page 98 (122): 5.2-1,2,3,4
  - page 118 (143): 5-2
- Quicksort:
  - page 148 (173): all exercises
  - page 153 (178): 7.2-1,2,3
  - page 163 (189): 7-6
- Sorting:
  - page 167 (193): 8.1-1
  - page 170 (196): 8.2-2,3,4
  - page 173 (199): 8.3-1,2,3,4

- page 178 (206): 8-2,3
- Order Statistics:
  - page 189 (219): 9.2-3,4
  - page 192 (223): 9.3-5,7,8, 9-1,2
- Augmenting Data Structures:
  - page 307 (344): 14.1-1,2,3,4,5, [14.1-6]
  - page 310 (347): 14.2-1,2,3
  - page 317 (353): 14.3-3,5, [14.3-4]
- Red-Black Trees:
  - page 276 (311): 13.1-1,2,3,4,5,6
  - page 278 (313): 13.2-1,2,3
  - page 287 (322): 13.3-2
- B-Trees:
  - page 440 (490): 18.1-1,2,3,4
  - page 447 (497): 18.2-1,3,6
- Dynamic Programming:
  - page 338 (378): 15.2-1,3
  - page 349 (389): 15.3-2,3
  - page 355 (396): 15.4-1,2,3,4