

## Homework 9

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Use the pdf problem set posted to the website, as the numbering may differ from that of the text. **Show your work and explain your reasoning.**

### Practice (Attempt these before attending recitation)

- (1) DMC Problem 22.7
- (2) DMC Problem 22.14(d)
- (3) DMC Problem 22.17
- (4) DMC Problem 23.15 (d)
- (5) DMC Problem 23.21
- (6) DMC Problem 23.14

### Recitation Lab (TA works these out in lab)

- (1) DMC Problem 22.8 (e), (g)
- (2) DMC Problem 22.18
- (3) DMC Problem 22.30
- (4) DMC Problem 22.39
- (5) DMC Problem 23.15 (f)
- (6) DMC Problem 23.35
- (7) DMC Problem 23.36 (show that the number of times is  $O(\log_2(xy))$  for  $x, y \in \mathbb{N}$ )

### Problems (Submit solutions)

- (1) **[15]** DMC Problem 22.22 (d), (e)
- (2) **[15]** DMC Problem 22.23 (b)
- (3) **[15]** DMC Problem 22.37
- (4) **[10]** DMC Problem 23.1 (explain)
- (5) **[10]** DMC Problem 23.3 (use regular expressions)
- (6) **[10]** DMC Problem 23.15 (h) (justify your answers)
- (7) **[15]** DMC Problem 23.30 (c)
- (8) **[10]** DMC Problem 23.34