Homework 12

IMPORTANT NOTE:
Use the PDF problem set posted to the course website; its problem numbering differs from the textbook.

Recitation problems (ungraded)

Attempt these before recitation. We will use recitation to work through selected solutions and the ideas behind them; they are chosen to prepare you for the graded problems below.

(1) DMC Problem 23.3 (b).
(2) DMC Problem 23.7 (b), (c).
(3) DMC Problem 23.11 (b).
(4) DMC Problem 23.24 (a)(ii).
(5) DMC Problem 24.3 (c).
(6) DMC Problem 24.8 (b), (c).
(7) DMC Problem 24.22 (a).

Problems to submit (50 points)

Show your work and explain your reasoning. A correct answer without adequate justification may receive little or no credit. As a reminder, the homework instructions require you to typeset your solutions, submit a pdf, and start each problem on a new page. Write in complete, grammatically sound sentences. The number in square brackets is the number of points each problem is worth.

(1) **[10]** DMC Problem 22.26.
(2) **[8]** DMC Problem 23.15 (h).
(3) **[8]** DMC Problem 23.30 (b).
(4) **[6]** DMC Problem 24.6 (b).
(5) **[8]** DMC Problem 24.23 (d).
(6) **[10]** DMC Problem 24.30 (a).

Bonus challenge (up to 10 bonus points)

This challenge is completely optional and is meant to be substantially more challenging than the required homework. Each of these two bonus problems is graded all-or-nothing: a complete solution earns the listed bonus points, while an incomplete solution earns no points. Bonus points are added to your homework score, up to a maximum score of **60/50**.

(1) **[5 bonus points]** DMC Problem 23.41.
(2) **[5 bonus points]** DMC Problem 24.30 (b), (c).