

Mate 3022 practice problems

Due 24/01

§ 6.1: exercises 7, 8, 13, 15, 18, 21, 23, 28, two of 41–47, two of 48–53, 57, 59, 62, 64.

Due 3/02

§ 6.1: 71, 73, 75–79, 82, 84.

§ 6.2: two of pbs 1–14, and many, many from 39–126 (see syllabus).

Due 5/02

§ 6.3: exercises 4–32 from syllabus.

Due 14/02

§ 7.1: all twenty-three problems from syllabus.

Due 18/02

§ 7.2: all twenty-four problems from syllabus.

Due 24/02

§ 7.3: at least one from each cluster of problems 1–22, and all of the problems 24–53 from syllabus.

§ 7.4: all problems from syllabus. For (a) of problems 43 and 44, which are strongly recommended, use l'Hospital's rule.

Suggested practice problems for the review session for the first partial exam, 26/02:

§ 6.1: 75–79, 82, 84. § 6.2: those problems that look mysterious, and 123–126. § 6.3: 8, 10, 29–32.

§ 7.1: any problems that look mysterious, including 37–42. § 7.2: 31–38. § 7.3 and § 7.4: see above.

Due 14/03

§ 8.1: four odd-numbered and four even-numbered problems from 1–16. Problems 19, 21, and the rest of the problems from syllabus.

Due 17/03

§ 8.2: problems 1–15 from syllabus.

Due 19/03

§ 10.1: all problems from syllabus. To find the range of a function, first describe the level sets.

Due 4/04

§ 10.2: problems 3, 7, 8, 10, 16–18, three of 21–30, 31–36. 16–18: for limits along curves, use parametrisation, as shown in class. 35–36: for the choice ρ of player two, indicate what is the corresponding choice r of player one.

§ 10.3: solve ten odd-numbered and ten even-numbered problems.

Due 23/04

§ 12.1: ten odd-numbered and sixteen even-numbered problems from problems 1–52.

Due 30/04

§ 12.2: problems 1–19, eight odd-numbered and eight even-numbered problems from 21–51, including pb 51.

Due 5/05

§ 12.3: three odd-numbered and three even-numbered problems from each of § 12.3.1, 12.3.2, 12.3.3, including pb 36.

All of problems 37–43 of § 12.3.4. One of these problems is likely to be on the final. Note added about problem 42: (a) “Find the probability that I-2 is a carrier” is not a meaningful question, as there is no sample space which can be defined containing the event in question, in the absence of information about previous generations. However, from the given data, you can infer that I-2 is a carrier, since a grandson is afflicted (hence himself a carrier), and I-1, not being afflicted, is not a carrier.

Due 9/05

§ 12.4: three odd-numbered and three even-numbered problems from 1–13. Four odd-numbered and four even-numbered problems from 15–32. Four odd-numbered and four even-numbered problems from 33–48.

Practice

§ 12.5: two odd-numbered and two even-numbered problems from § 12.5.1. Four odd-numbered and four even-numbered problems from § 12.5.2. Problems 37–40, problem 42 of § 12.5.3. In problem 42, the event that $Y > y$ is the same as the event “each of $X_1, X_2, X_3 > y$ ”.