UNIVERSITY OF TORONTO
Faculty of Arts and Science

MAT 237 - Final Exam
August 19, 2023

Allotted Time: 180 minutes | Instructors: Arman Pannu, David Pechersky

Name: _____

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Student Number: _____

Instructions:

- This exam contains 14 pages (including the title page and spares) and consists of 8 questions some of which contain multiple parts. The exam is out of 80 total marks.

- This test is **closed book**; all aids are prohibited including but not limited to: calculators, lecture notes, textbooks, personal electronic devices and online tools such as Wolfram Alpha.

- Read all instructions carefully. Unless otherwise stated, you must **fully justify your answers** using concepts and theorems learned in the course. No points will be awarded for a correct answer without proper justification.

- Unless otherwise stated, you may reference any theorems covered in the textbook or the lectures notes as well as any problems on the problem sets. When doing so, you do not have