University of Toronto
Faculty of Arts and Science

MAT237 Multivariable Calculus with Proofs
Final Exam

T. Janisse, C. Jonker, and A. Zaman

Tuesday April 12, 2022

Duration: 180 minutes

No aids permitted

Instructions

- **Do not open the exam until you are instructed to do so.** Failure to comply is an academic offence.
- **No aids are permitted on this examination.** Examples of illegal aids include but are not limited to textbooks, notes, calculators, cellphones, or any electronic device.
- **Once the exam begins, check that you have all pages.** This exam contains 16 pages including this cover page, and is printed **double-sided** on 8 sheets of paper. There are 10 problems.
- **Show your work and justify your steps** on every question, unless otherwise indicated.
- **Organize your work** in a reasonably neat and coherent way, in the space provided. Work scattered all over the page without a clear ordering will receive very little credit.