

Name: _____ Student Number: _____

Mathematics 1110H, TRENT UNIVERSITY, Fall 2025.

Test #4 for Sections F02 and F04. *Friday, 14 November.* Time: 20 minutes.

Instructions

- Write your name and student number at the top.
- Use only this sheet of paper, including the back side. If you need more paper, ask for it.
- You may use an aid sheet, A4- or letter-size with whatever you want written on all sides, and a calculator, with no restrictions beyond not being able to communicate with other devices.
- **Do one (1) of questions 1 or 2.** (Question 2 is on page 2.)

1. What is the maximum area of a rectangle whose diagonal is 10 *cm* long? *[10]*

2. Sticklike Figure, who is 1.5 m tall, walks at 2 m/s on level ground at night, straight towards a 3 m tall lamppost that is lit up. How fast is the tip of Sticklike's shadow moving along the ground at the instant that Sticklike is 6 m from the lamppost? *[10]*