

Name: \_\_\_\_\_ Student Number: \_\_\_\_\_

Mathematics 1110H, TRENT UNIVERSITY, Fall 2025

Test #1 for Section F01 and CAT. *Friday, 26 September.* 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 any two (2) of questions 1–3.** *If you do all three and don't cross one out, only the first two encountered by the graders will be marked.*

1. Find the  $x$ -intercepts and the location of the tip of the parabola  $y = x^2 + 6x + 5$ . [5]
2. Use the  $\varepsilon$ - $\delta$  definition of limits to verify that  $\lim_{x \rightarrow 2} (3x + 4) = 10$ . [5]
3. Use the practical rules for computing limits to compute  $\lim_{x \rightarrow 5} \frac{x^2 - 6x + 5}{x^2 - 3x - 10}$ . [5]