Name: _____ **Student Number:** _____

Mathematics 1110H, TRENT UNIVERSITY, Fall 2025.

Test #5 for Sections F03 and F05. *Friday, 28 November.* Time: 30 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 four (4) of questions 1–6.**

1. $\displaystyle\int_1^2 \frac{x^2 - x - 2}{x + 1}\, dx$ **2.** $\displaystyle\int e^x \cos(x)\, dx$ **3.** $\displaystyle\int_0^{\pi/4} 2\tan(x)\sec^2(x)\, dx$

4. $\displaystyle\int_0^{\pi/2} \cos^3(x)\, dx$ **5.** $\displaystyle\int x \ln\left(x^2\right)\, dx$ **6.** $\displaystyle\int_0^2 \frac{4x}{\sqrt{4 + x^2}}\, dx$