University of Primorska, FAMNIT
academic year 2026/2027

Analysis I
1st quiz - BF
22 October 2026

Name and Surname :

Student Number :

Program :

• *All unauthorized materials (textbooks, calculators, electronic devices, etc.) are not permitted to have them during the examination.*
• *ANY form of communication with fellow students during the exam will not be accepted. Students involved will immediately be expelled from the classroom.*
• *If you leave the classroom after the exam has started then you are not allowed back in.*
• *Do all the computations fully. Also, whenever the answer is a ratio, simplify it as much as possible.*
• *In your solutions, explain the arguments leading to the answer in a clear, organized fashion. You might get no points for correct answers with no explanation and/or unorganized solution.*

Write your solutions clearly and justify each answer.

Duration: 20 *minutes.* *There are* 2 *problems worth a total of* 100 *points.*

Good luck!

1. *(40 points)* Prove that $\sqrt{17}$ is irrational.

2. *(6o points)* Prove that $3 + 11 + \cdots + (8n - 5) = 4n^2 - n$, for all $n \in \mathbb{N}$.