

**UM 101: QUIZ 3**

**Nov. 10, 2022**

**Duration.** 15 minutes

**Name.**

**Maximum score.** 10 points

**Tutorial section.**

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*Instructions.* You may cite without proof any examples or theorems stated in class. This includes the limit laws for convergent sequences. You will lose points if you don't state what you are using.

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**Problem.** Let  $a_n = \frac{3n^2 - 2}{3n + 1}$ ,  $n \in \mathbb{N}$ . Show that the sequence  $\{a_n\}_{n \in \mathbb{N}}$  diverges to  $\infty$ .