

# UNDERSTANDING & EXPLANATION TASK U4

MasterMath: Set Theory

2021/22: 1st Semester

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**Deadline for Understanding & Explanation Task U4:** Monday, 8 November 2021, 2pm. Please hand in via the e1o webpage as a single pdf file.

*Understanding & Explanation tasks (U).*

*Marking Scheme.*

An answer will be considered **good** if all three criteria are satisfied. These answers will get full points (i.e.,  **$3\frac{1}{2}$  points**).

It will be considered **satisfactory** if it has minor deficiencies in some of the three criteria. Satisfactory answers will get **3 points**.

It will be considered unsatisfactory if it has a major deficiency in either correctness or comprehensivity. Unsatisfactory answers will get either **2 points**, **1 point**, or **0 points**, depending on the flaws.

**Task U4:** Explain how the evaluation of  $2^{\aleph_\omega}$  proceeds in all four combinations of the following circumstances

- $2^{\aleph_0} < \aleph_\omega$  versus  $2^{\aleph_0} > \aleph_\omega$
- in general versus if SCH holds

Also explain why is there not a third possibility in the first item?