

MATHEMATICAL LOGIC — ASSIGNMENT FOUR

- (1) Show a Heyting algebra in which $\neg\neg P \supset P$ is not valid.
- (2) Define when a relation is representable in Peano arithmetic.
- (3) Show that Peano arithmetic has at least 2^{\aleph_0} non isomorphic models.

Each question is worth 12 points. The points in all the four assignments will be added together and the result will be divided by 4, and this will be the final result. Remember to mark your answer sheet with your name.

Date: June 8th, 2022.