

Department of Mathematics

Internal Examination 2020

MATH-G-SEC-T-1A

Logic and Sets

1. For any three sets A,B,C prove that

$$A \Delta (B \Delta C) = (A \Delta B) \Delta C$$

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2. Show that the relation defined on  $\mathbb{Z}$  by

$$\rho = \{(x, y) : 3x + 4y \text{ is divisible by } 7\}$$

is an equivalence relation.

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