

MAT-255– NUMBER THEORY

SPRING 2024

IN CLASS WORK JANUARY 17

Your Name: \_\_\_\_\_ Group Members: \_\_\_\_\_

**In-class Problem 1**      Prove

**Theorem (Ernst, Theorem 2.2).** *If  $n$  is an even integer, then  $n^2$  is even.*

Wait for more lecture before proceeding to the back

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Learning outcomes:  
Author(s): Claire Merriman

**In-class Problem 2**      Prove

**Theorem (Strayer, Proposition 1.2).** *Let  $a, b, c, m, n \in \mathbb{Z}$ . If  $c \mid a$  and  $c \mid b$  then  $c \mid ma + nb$ .*