

Homework 4 (Due Tues, Feb 18)

Math 2710 – Spring 2014

Professor Hohn

Using the proof techniques we have learned in class, prove each statement.

1. **Multiplying an integer by zero.**

Let $a, b, c \in \mathbb{Z}$. Then, $0 \cdot a = 0$.

2. **Multiplying by a negative integer.**

Let $a, b, c \in \mathbb{Z}$. Then, $a \cdot (-b) = -ab$.

3. Cancellation law

Let $a, b, c \in \mathbb{Z}$. Then, if $a \neq 0$ and $ab = ac$, then $b = c$.