Math 2001, Spring 2023. Katherine E. Stange.

1 Assignment

Prove the following theorem by contradiction.

Theorem 1. Let $a, b, c \in \mathbb{Q}$. There is at most one integer x which satisfies ax + b = c.

Note: this is practice in writing a proof by contradiction. An alternate method would be to solve for x, but I want you to avoid that method and instead try to do this by contradiction.