

QUIZ 6:

NAME: _____

(1) Explain why multiplication by 3 is a bijection from \mathbb{R} to \mathbb{R} but not from \mathbb{Z} to \mathbb{Z} .

(2) Prove that the composition of two injections is an injection.

(3) Suppose that A and B are finite sets.

(a) If $f : A \rightarrow B$ is injective, what is implied about the sizes of A and B ?

(b) If $f : A \rightarrow B$ is surjective, what is implied about the sizes of A and B ?

(4) Define *equivalence relation*.