

## MATH310 Groupwork 2022-08-02

NAME:

1. Prove that the function  $f : \mathbb{R} \rightarrow \mathbb{R}$  given by  $f(x) = |x| + 5$  is not injective.

**Solution:**

2. Prove that the function  $f : \mathbb{R} - \{1\} \rightarrow \mathbb{R}$  given by  $f(x) = \frac{x}{x-1}$  is injective.

**Solution:**

3. Prove that the function  $f : \mathbb{R} \rightarrow \mathbb{R}$  given by  $f(x) = |x| + 5$  is not surjective.

**Solution:**

4. Prove that the function  $f : \mathbb{R} \rightarrow \mathbb{R}$  given by  $f(x) = (x - 2)^3$  is surjective.

**Solution:**