

## MATH310 Groupwork 2022-08-03

NAME:

1. Prove that  $f : \mathbb{R} \rightarrow \mathbb{R}$  defined by  $f(x) = x^3 + 2x^2 - x - 1$  is not 1-1 and therefore has no inverse.

Hint: Can you show there are two places where it equals zero?

**Solution:**

2. Prove that  $f : \mathbb{R} - \{2\} \rightarrow \mathbb{R}$  defined by  $f(x) = \frac{x}{x-2}$  is 1-1 and find a formula for its inverse.

**Solution:**