Quiz 4.3

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MATH 3305 MATHEMATICAL REASONING

Introduction to Advanced Mathematics, Second Edition
Barnier and Feldman © 2000 by Prentice-Hall, Inc.

Closed Book.

1. Fill in the blank: A 1-1 function \( f : D \to C \) is a function from \( D \) to \( C \) that passes the _______ test.

2. Practice Problem 4 Define \( f : (2, \infty) \to (1, \infty) \) by \( f(x) = \frac{x+1}{x-2} \). \( f \) is bijective. Find its inverse.

3. Let \( f = \begin{pmatrix} 1 & 2 & 3 & 4 \\ 2 & 3 & 1 & 4 \end{pmatrix} \) and \( g = \begin{pmatrix} 1 & 2 & 3 & 4 \\ 2 & 1 & 4 & 3 \end{pmatrix} \). Find \( f^{-1} \), \( f^{-1} \circ f \), \( f \circ g \), \( g \circ f \), \( (g \circ f)^{-1} \).

Solutions given in class. Note that PP4 solution on page 153 is wrong.