

CS113/DISCRETE MATHEMATICS-SPRING 2024

Worksheet 11

Topic: Composite Functions

Today, we will learn about composite functions. Happy Learning!

Student's Name and ID: _____

Instructor's name: _____

1. Suppose that g is a function from A to B and f is a function from B to C . Prove each of these statements
 - (a) If $f \circ g$ is onto, then f must also be onto

(b) If $f \circ g$ is one-to-one, then g must also be one-to-one

(c) If $f \circ g$ is a bijection, then g is onto if and only if f is one-to-one

2. Let $F : X \rightarrow Y$ be a function. Show F^{-1} is a function from Y to X if and only if F is a 1-1 correspondence.