

Properties of the Composition of Functions

Reference:

Melhuish, K., Lew, K., Hicks, M. D., & Kandasamy, S. S. (2020). Abstract algebra students' evoked concept images for functions and homomorphisms. *The Journal of Mathematical Behavior*, 60, 100806.

Let $f : A \rightarrow B$ and $g : B \rightarrow C$ be functions.

1. If $g \circ f$ is 1-1, what if anything can we say about f or g ?
2. If $g \circ f$ is onto, what if anything can we say about f or g ?