

Hints to homework 9:

1. See if you remember any theorems about what happens if $g \circ f$ is bijective to get an idea of whether it is true or not, and why so. When doing the actual proof I am guessing the intended solution is for you NOT to use these theorems however.
3. Try drawing it out. See the image attached.

The rest is just checking definitions or seeing if you remember how to use some tools from high school relating to functions.