

MTH 309

Additional Problems for Sec. 2.3

1. Let $g : A \rightarrow B$ and $f : B \rightarrow C$ be functions. Justify your answer on each of the following.
 - (a) If $f \circ g$ is one to one, does it follow that g is one to one?
 - (b) If $f \circ g$ is one to one, does it follow that f is one to one?
 - (c) If $f \circ g$ is onto, does it follow that g is onto?
 - (d) If $f \circ g$ is onto, does it follow that f is onto?