## Section 3.5 Composite Functions

Objective 4: Forming and Evaluating Composite Functions
Definition: Given functions $f$ and $g$, the composite function, $f \circ g$ (also called the composition of $\boldsymbol{f}$ and $\boldsymbol{g})$ is defined by $(f \circ g)(x)=f(g(x))$ provided $g(x)$ is in the domain of $f$.

The composition of $f$ and $g$ does not equal the product of $f$ and $g:(f \circ g)(x) \neq f g(x)$.
Also , the composition of $f$ and $g$ does not necessarily equal the composition of $g$ and $f$ though this equality does exist for certain pairs of functions.

