Section 3.5 Composite Functions

# Review of Evaluating Functions for Given Inputs

See section 3.1.

# Review of Simplifying Rational Expressions

A rational number is the quotient of two integers. A **rational expression** is the quotient of two polynomial expressions. A simplified rational expression has the form  where *P* and *Q* are polynomials such that  and the degree of *Q* is greater than or equal to $1$.

# Objective 4: Forming and Evaluating Composite Functions

***Definition*:** Given functions *f* and *g,* the **composite function**,  (also called the **composition of *f* and *g***)is defined by provided is in the domain of *f*.

 **The composition of *f* and *g* does not equal the product of *f* and *g*: .**

**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.**