## **Using the Quotient Rule to find the Derivative**

## **The Process for the Quotient Rule:**

1. Given then
2. Identify
3. ; Quotient Rule
4. Substitute and simplify

**Some other helpful rules:**

**Example of Quotient Rule:**

 *g(x) =*

*; substitute the individual pieces*

*; then simplify*

*; factor out like terms before combining*

*;*

*🡪*

**Trig components Example:**

*= ln(x)*

; simplify

🡪 🡪

**Example:**

; When you are working with radicals, the following exponent rules may come in handy:

 *g(x) =*

 *(2x) = =*

 so, we have:

; then we begin simplifying and re-writing (if necessary)

; getting a common denomination

; continuing to simplify

; continuing to simplify

 🡪 🡪

**You try’s:**

1. H(x) =
2. H(x) =
3. H(x) =

**Solutions:**

1. **2. 3. 4.**